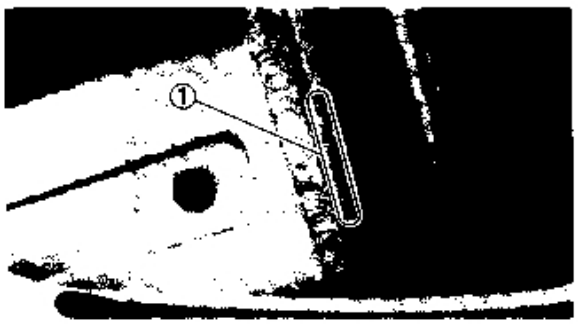
YAMAHA

TZR250 '87

2MA-SE1

SERVICE INFORMATION

GENERAL INFORMATION



MOTORCYCLE IDENTIFICATION

FRAME SERIAL NUMBER

The frame serial number ① is stamped into the right side of the steering head pipe.

Starting Serial Number:	
TZR250	2MA-000101

ENGINE SERIAL NUMBER

The engine serial number ① is stamped into the elevated part of the right rear section of the engine.

Starting Serial Number:	
TZR250	2MA-000101

NOTE:

- The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.
- Designs and specifications are subject to change without notice.

PERIODIC INSPECTION AND ADJUSTMENT

INTRODUCTION

This chapter includes all information necessary to perform recommended inspections and adjustments. These preventive maintenance procedures, if followed, will ensure more reliable vehicle operation and a longer service life. The need for costly overhaul work will be greatly reduced. This information applies to vehicles already in service as well as new vehicles that are being prepared for sale. All service technicians should be familiar with this entire chapter.

PERIODIC MAINTENANCE/LUBRICATION INTERVALS

Unit: km (mi)

ITEM	REMARKS	BREAK-IN 1,000 (600)	EVERY 6,000 (4,000) or 6 months	EVERY 12,000 (8,000) or 12 months
Spark plug(s)	Check condition. Clean or replace if necessary.	○	○	○
Air filter	Clean. Replace if necessary.		○	○
Carburetor	Check idle speed/synchronization/starter operation. Adjust if necessary.	○	○	○
Fuel line	Check fuel hose and vacuum hose for cracks or damage. Replace if necessary.		○	○
Transmission oil	Check oil level/oil leakage. Correct if necessary. Replace every 24,000 (16,000) or 24 months. Warm engine before draining.	REPLACE	○	○
Autolube pump	Check operation. Correct if necessary. Air bleeding.	○	○	○
YPVS system	Check operation. Correct if necessary.	○	○	○
Brake	Check operation/fluid leakage/See NOTE. Correct if necessary.		○	○
Clutch	Check operation. Adjust if necessary.		○	○
Swingarm pivot	Check swingarm assembly for looseness. Correct if necessary. Moderately repack every 24,000 (16,000) or 24 months. Lubricate.**			○
Rear suspension link pivots	Check operation. Apply grease lightly every 24,000 (16,000) or 24 months. Lubricate.**			○
Wheels	Check balance/damage/runout. Repair if necessary.		○	○
Wheel bearings	Check bearing assembly for looseness/damage. Replace if damaged.		○	○
Steering bearing	Check bearing assembly for looseness. Correct if necessary. Moderately repack every 24,000 (16,000) or 24 months.**	○		○
Front forks	Check operation/oil leakage. Repair if necessary.		○	○
Rear shock absorber	Check operation/oil leakage. Repair if necessary.		○	○
Cooling system	Check coolant leakage. Repair if necessary. Replace coolant every 24,000 (16,000) or 24 months.		○	○
Drive chain	Check chain slack/alignment. Adjust if necessary. Clean and lube.	EVERY 500 (300)		
Fittings/Fasteners	Check all chassis fittings and fasterners. Correct if necessary.	○	○	○
Sidestand	Check operation. Repair if necessary.	○	○	○
Sidestand switch	Check operation. Repair if necessary.	○	○	○
Battery	Check specific gravity. Check breather pipe for proper operation. Correct if necessary.		○	○

**: Lithium soap base grease

INTRODUCTION/PERIODIC MAINTENANCE/ LUBRICATION INTERVALS

INSP ADJ

NOTE:

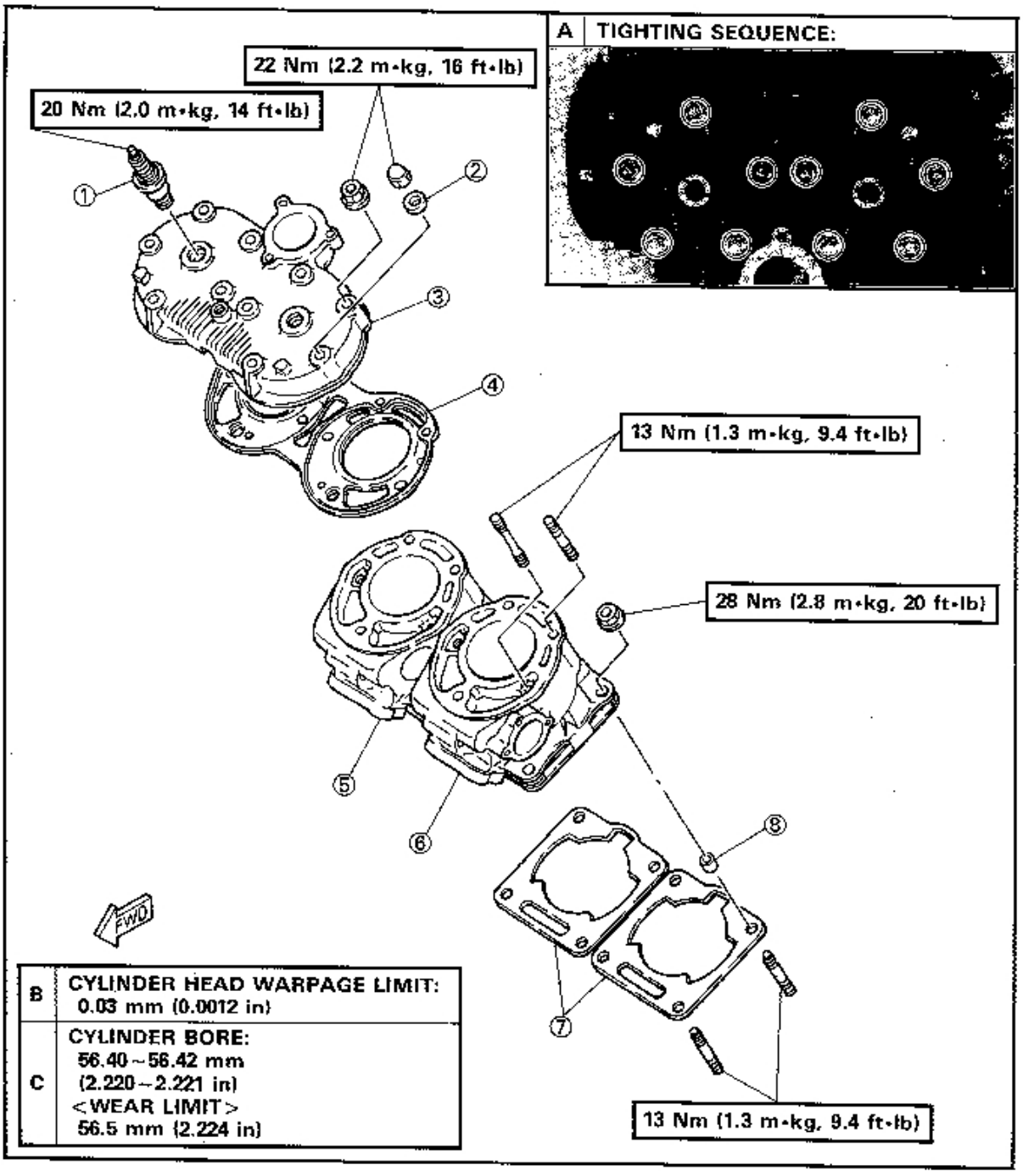
Brake system:

1. When disassembling the master cylinder or caliper cylinder, replace the brake fluid. Normally check the brake fluid level and add the fluid as required.
2. We recommended that, on the inner parts of the master cylinder and caliper cylinder, replace the oil seals every two years.
3. We recommended that, replace the brake hoses every four years, or if cracked or damaged.

EXPLODED DIAGRAM

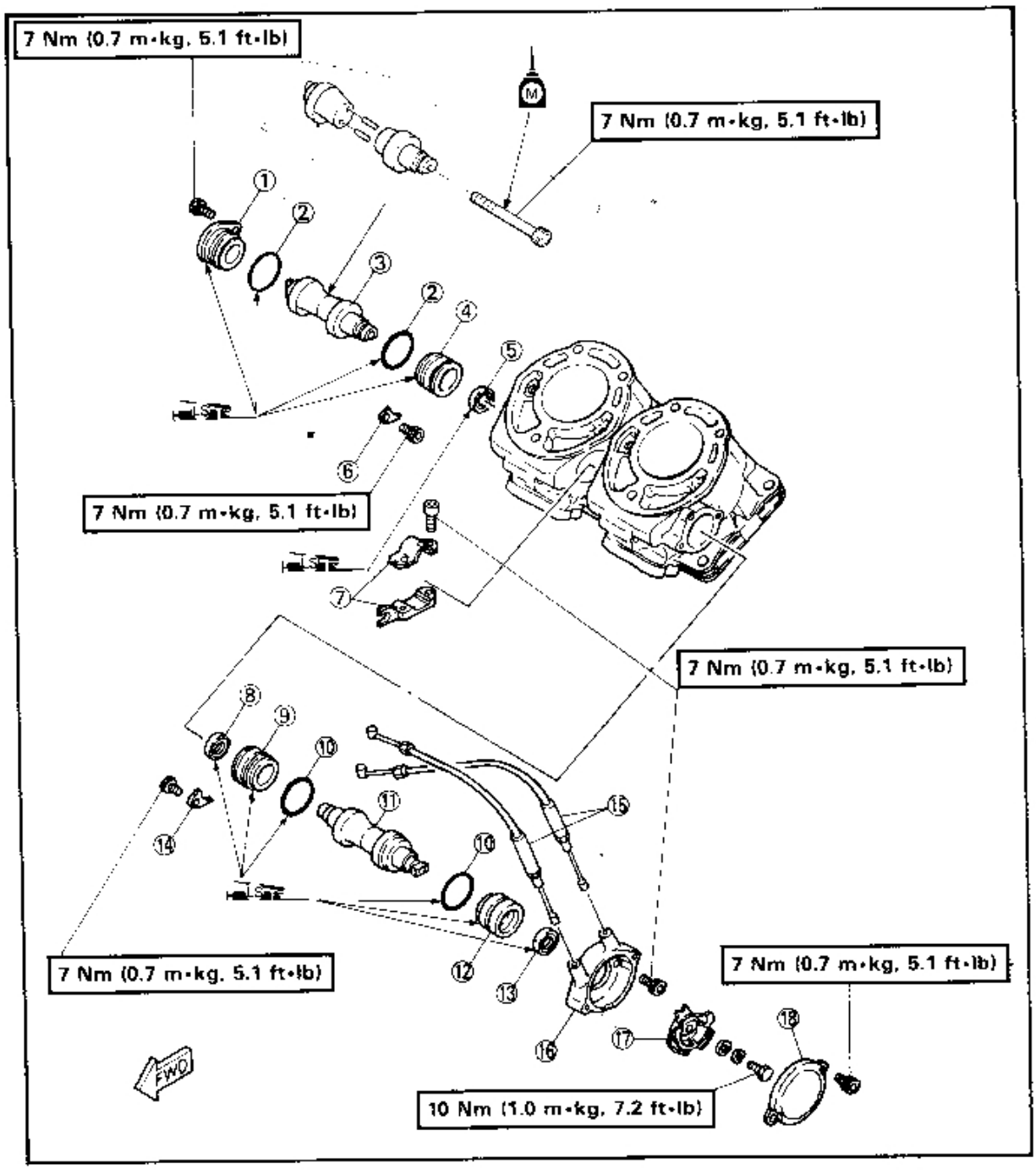
CYLINDER AND CYLINDER HEAD

① Spark plug
② Copper washer
③ Cylinder head
④ Gasket
⑤ Cylinder (Right-hand)
⑥ Cylinder (Left-hand)
⑦ Gasket
⑧ Dowel pin


A TIGHTING SEQUENCE:
22 Nm (2.2 m•kg, 16 ft•lb)
20 Nm (2.0 m•kg, 14 ft•lb)
13 Nm (1.3 m•kg, 9.4 ft•lb)
28 Nm (2.8 m•kg, 20 ft•lb)
13 Nm (1.3 m•kg, 9.4 ft•lb)
FWD
B CYLINDER HEAD WARPAGE LIMIT: 0.03 mm (0.0012 in)
C CYLINDER BORE: 56.40 – 56.42 mm (2.220 – 2.221 in) <WEAR LIMIT> 56.5 mm (2.224 in)

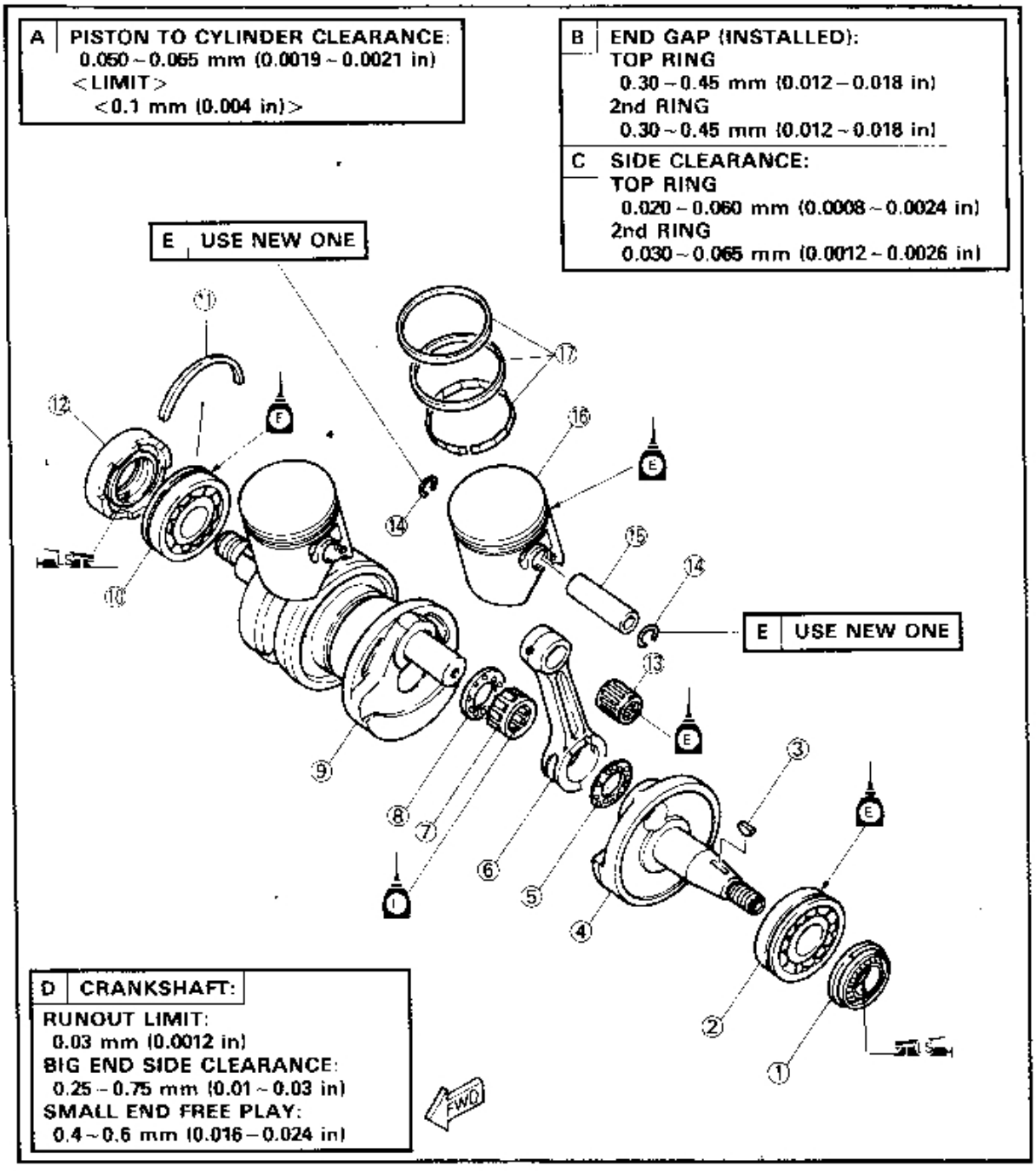
POWER VALVE

① Power valve holder
② O-ring
③ Power valve (Right-hand)
④ Power valve holder
⑤ Oil seal
⑥ Thrust plate
⑦ Joint
⑧ Oil seal
⑨ Power valve holder
⑩ O-ring
⑪ Power valve (Left-hand)
⑫ Holder
⑬ Oil seal
⑭ Thrust plate
⑮ Y.P.V.S. cable
⑯ Pulley housing
⑰ Pulley
⑱ Pulley cover


7 Nm (0.7 m•kg, 5.1 ft•lb)
7 Nm (0.7 m•kg, 5.1 ft•lb)
7 Nm (0.7 m•kg, 5.1 ft•lb)
7 Nm (0.7 m•kg, 5.1 ft•lb)
7 Nm (0.7 m•kg, 5.1 ft•lb)
7 Nm (0.7 m•kg, 5.1 ft•lb)
10 Nm (1.0 m•kg, 7.2 ft•lb)
FWD

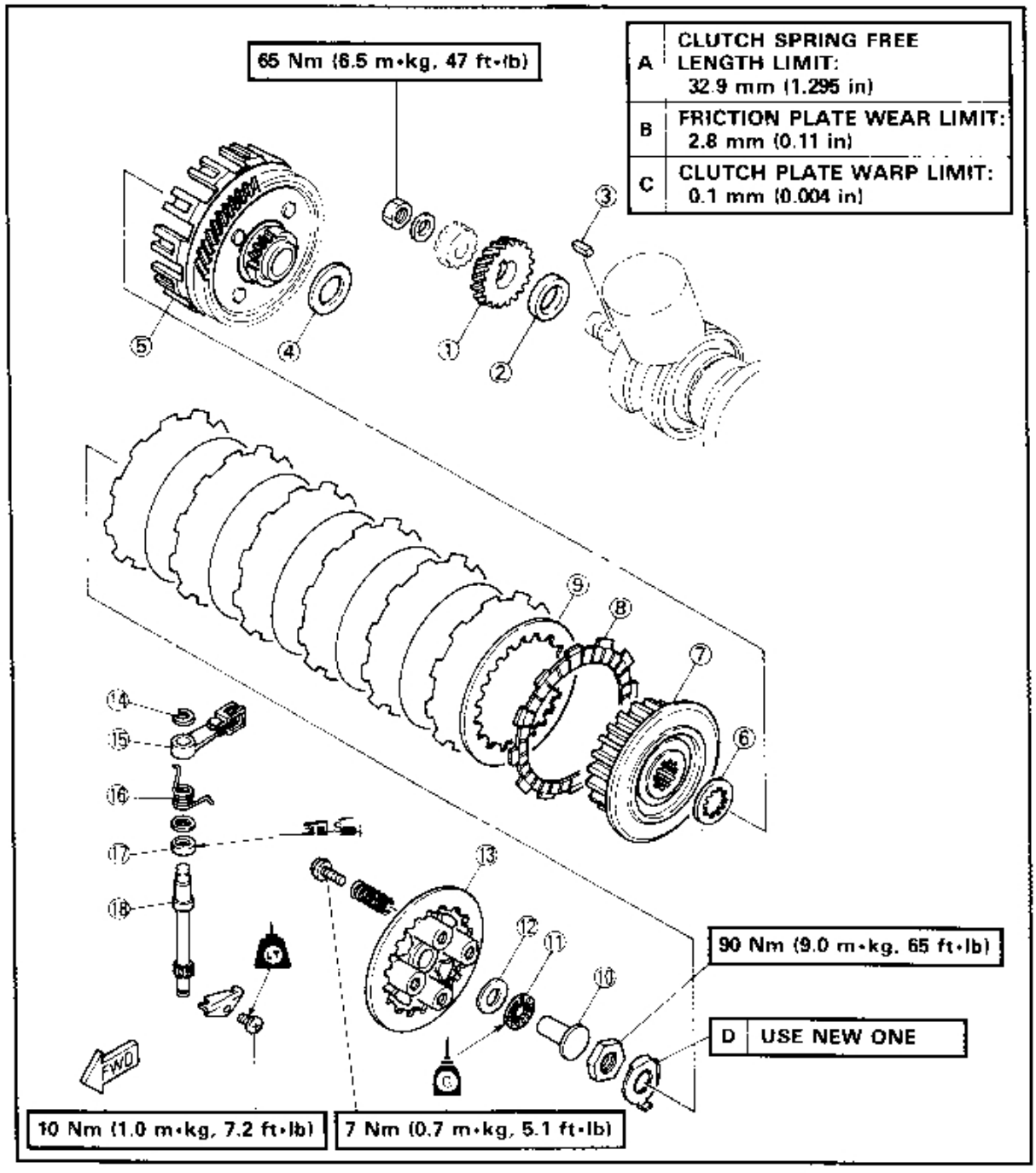
CRANKSHAFT, PISTON AND PISTON RING

① Oil seal
② Bearing
③ Woodruff key
④ Crank (Left)
⑤ Washer
⑥ Connecting rod
⑦ Big end bearing
⑧ Washer
⑨ Crank (Right)
⑩ Bearing
⑪ Circlip
⑫ Oil seal
⑬ Small end bearing
⑭ Piston pin clip
⑮ Piston pin
⑯ Piston
⑰ Piston ring set


A | PISTON TO CYLINDER CLEARANCE:
0.050 – 0.055 mm (0.0019 – 0.0021 in)
<LIMIT>
<0.1 mm (0.004 in)>
B | END GAP (INSTALLED):
TOP RING
0.30 – 0.45 mm (0.012 – 0.018 in)
2nd RING
0.30 – 0.45 mm (0.012 – 0.018 in)
C | SIDE CLEARANCE:
TOP RING
0.020 – 0.060 mm (0.0008 – 0.0024 in)
2nd RING
0.030 – 0.065 mm (0.0012 – 0.0026 in)
E | USE NEW ONE
E | USE NEW ONE
D | CRANKSHAFT:
RUNOUT LIMIT:
0.03 mm (0.0012 in)
BIG END SIDE CLEARANCE:
0.25 – 0.75 mm (0.01 – 0.03 in)
SMALL END FREE PLAY:
0.4 – 0.6 mm (0.016 – 0.024 in)
FWD

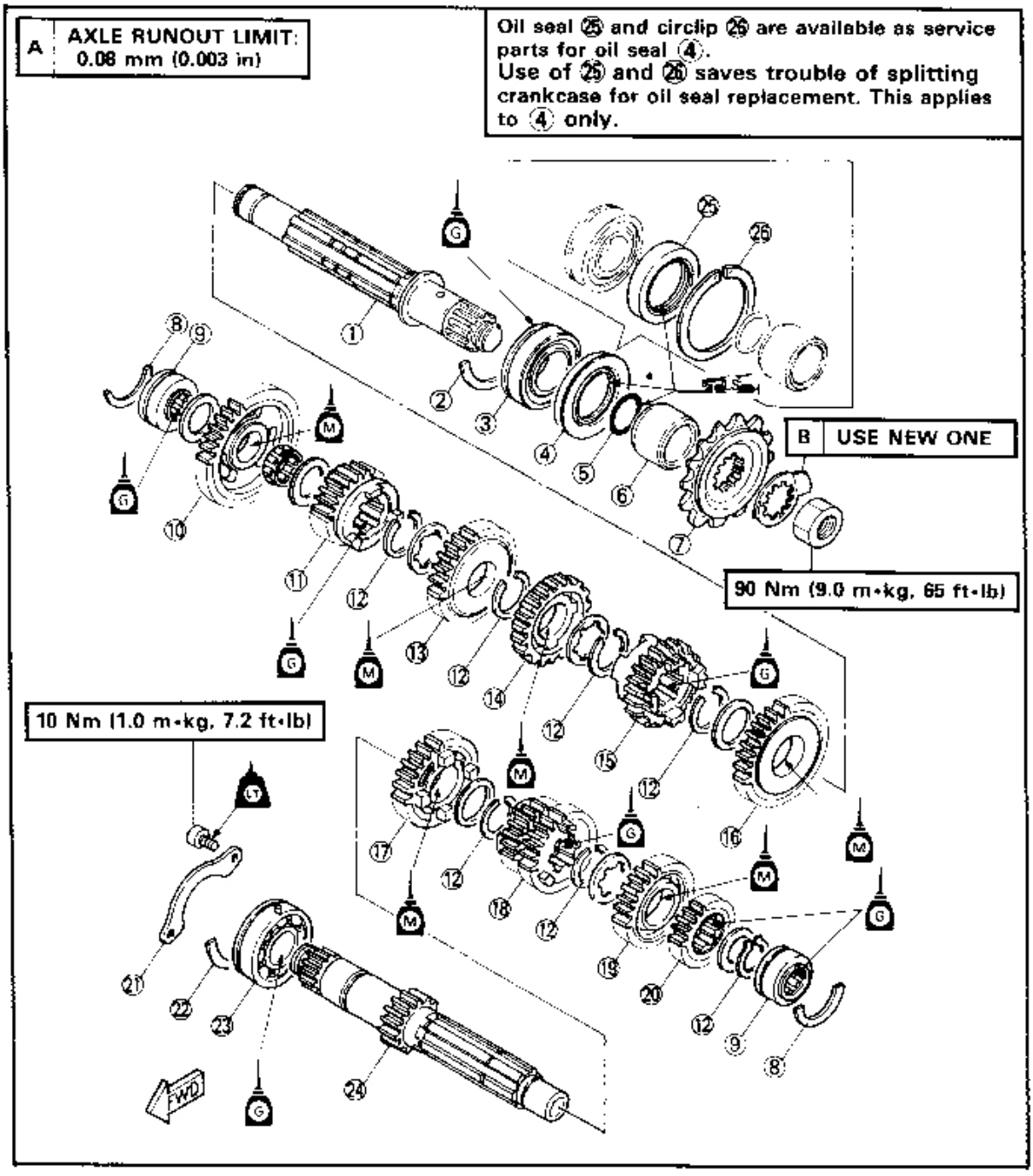
CLUTCH AND PRIMARY DRIVE GEAR

① Primary drive gear
② Spacer
③ Key
④ Thrust washer
⑤ Clutch housing
⑥ Thrust washer
⑦ Clutch boss
⑧ Friction plate
⑨ Clutch plate
⑩ Pull rod
⑪ Bearing
⑫ Washer
⑬ Pressure plate
⑭ Circlip
⑮ Pull lever
⑯ Spring
⑰ Oil seal
⑱ Lever rod


65 Nm (6.5 m•kg, 47 ft•lb)
A CLUTCH SPRING FREE LENGTH LIMIT: 32.9 mm (1.295 in)
B FRICTION PLATE WEAR LIMIT: 2.8 mm (0.11 in)
C CLUTCH PLATE WARP LIMIT: 0.1 mm (0.004 in)
90 Nm (9.0 m•kg, 65 ft•lb)
D USE NEW ONE
FWD
10 Nm (1.0 m•kg, 7.2 ft•lb)
7 Nm (0.7 m•kg, 5.1 ft•lb)

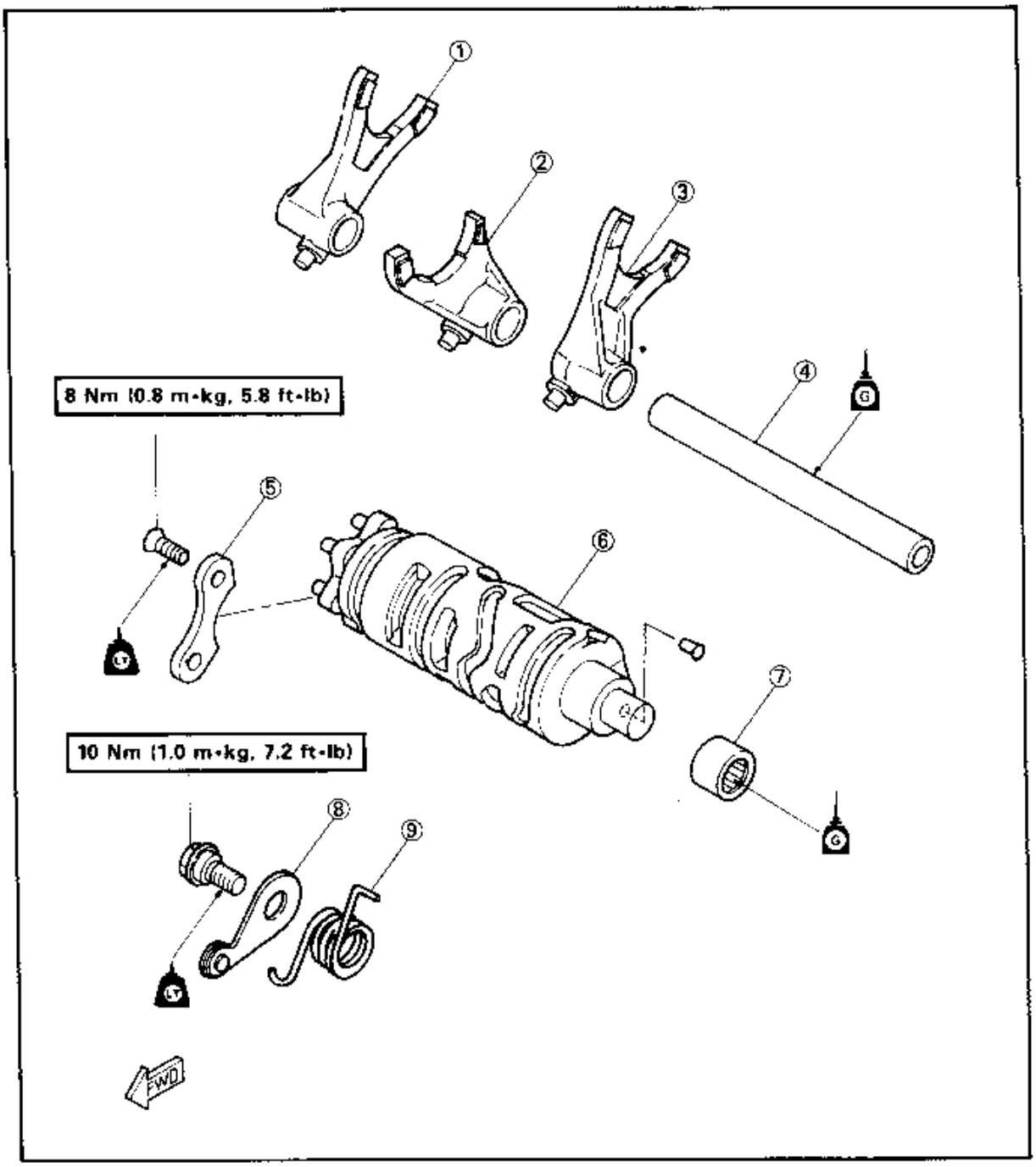
TRANSMISSION

① Drive axle
② Stopper ring
③ Bearing
④ Oil seal
⑤ O-ring
⑥ Collar
⑦ Drive sprocket
⑧ Stopper ring
⑨ Bearing
⑩ 1st wheel gear
⑪ 6th wheel gear
⑫ Circlip
⑬ 3rd wheel gear
⑭ 4th wheel gear
⑮ 5th wheel gear
⑯ 2nd wheel gear
⑰ 6th pinion gear
⑱ 3rd/4th pinion gear
⑲ 5th pinion gear
⑳ 2nd pinion gear
㉑ Bearing holder
㉒ Stopper ring
㉓ Bearing
㉔ Main axle
㉕ Oil seal
㉖ Circlip


A AXLE RUNOUT LIMIT: 0.08 mm (0.003 in)
Oil seal ㉕ and circlip ㉖ are available as service parts for oil seal ④.
Use of ㉕ and ㉖ saves trouble of splitting crankcase for oil seal replacement. This applies to ④ only.
B USE NEW ONE
90 Nm (9.0 m•kg, 65 ft•lb)
10 Nm (1.0 m•kg, 7.2 ft•lb)
FWD

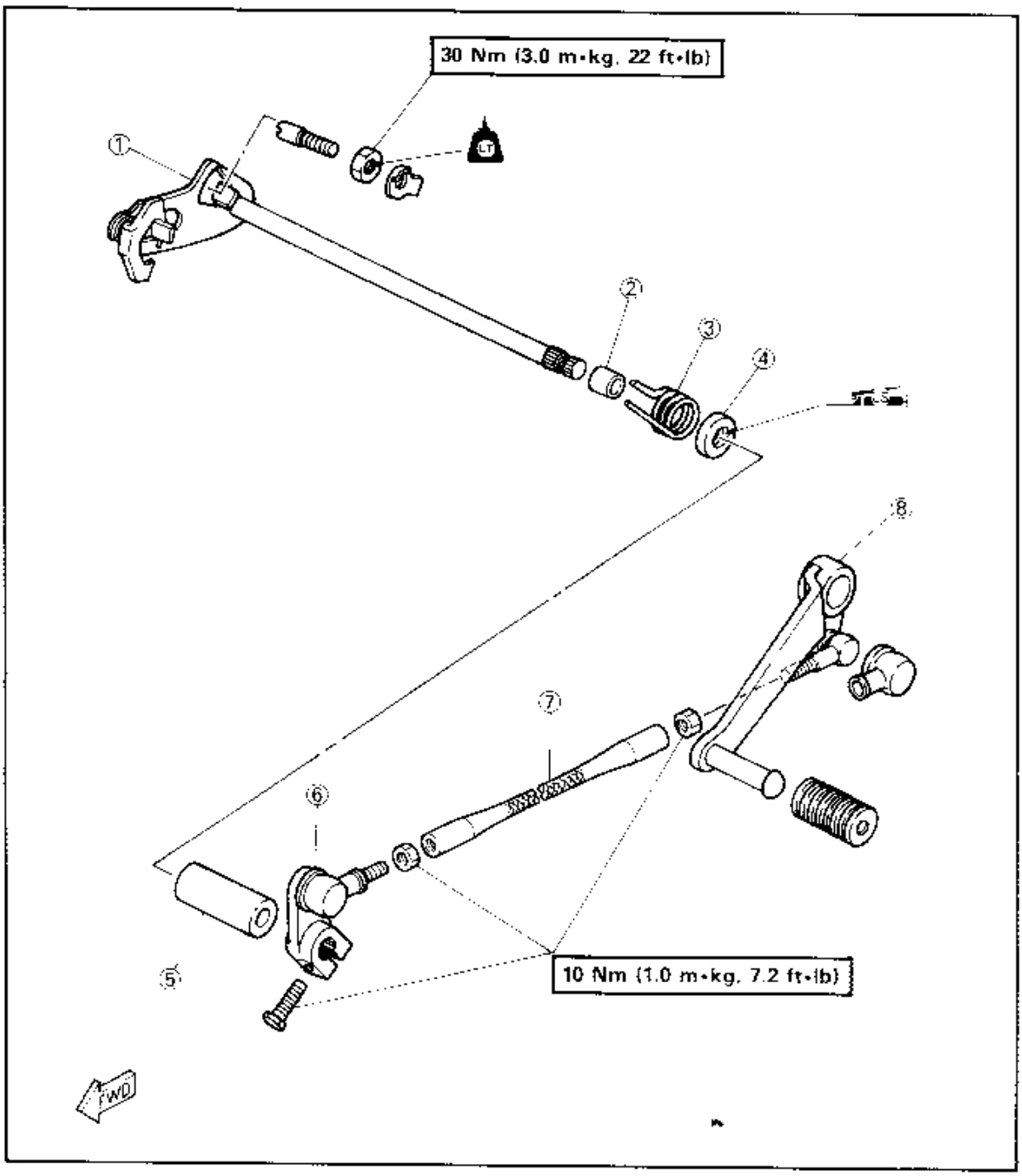
SHIFTER

① Shift fork #3
② Shift fork #2
③ Shift fork #1
④ Guide bar
⑤ Stopper plate
⑥ Shift cam
⑦ Bearing
⑧ Stopper lever
⑨ Return spring



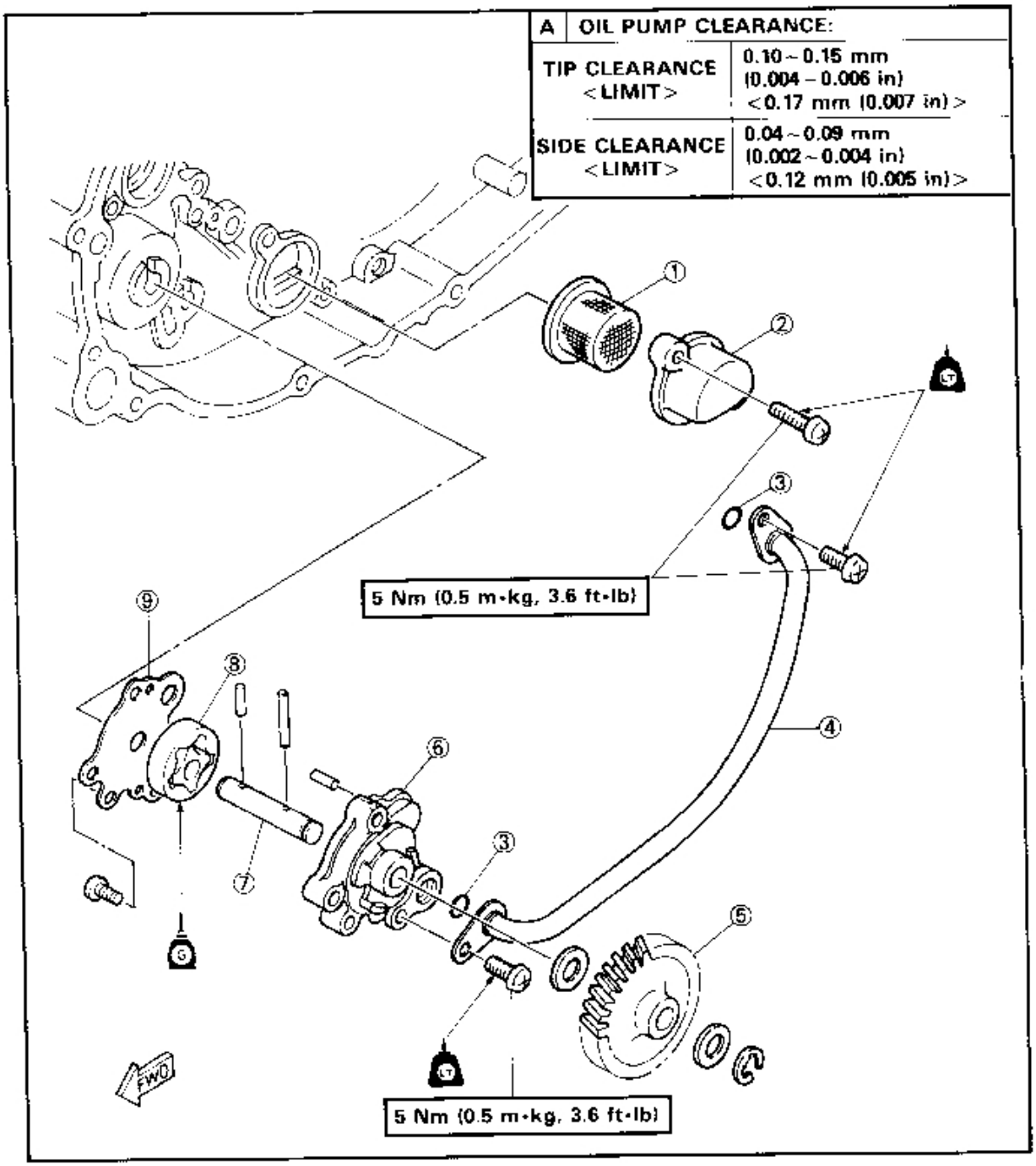
SHIFT SHAFT AND CHANGE PEDAL

① Shift shaft
② Spacer
③ Torsion spring
④ Oil seal
⑤ Collar
⑥ Shift arm
⑦ Shift rod
⑧ Change pedal



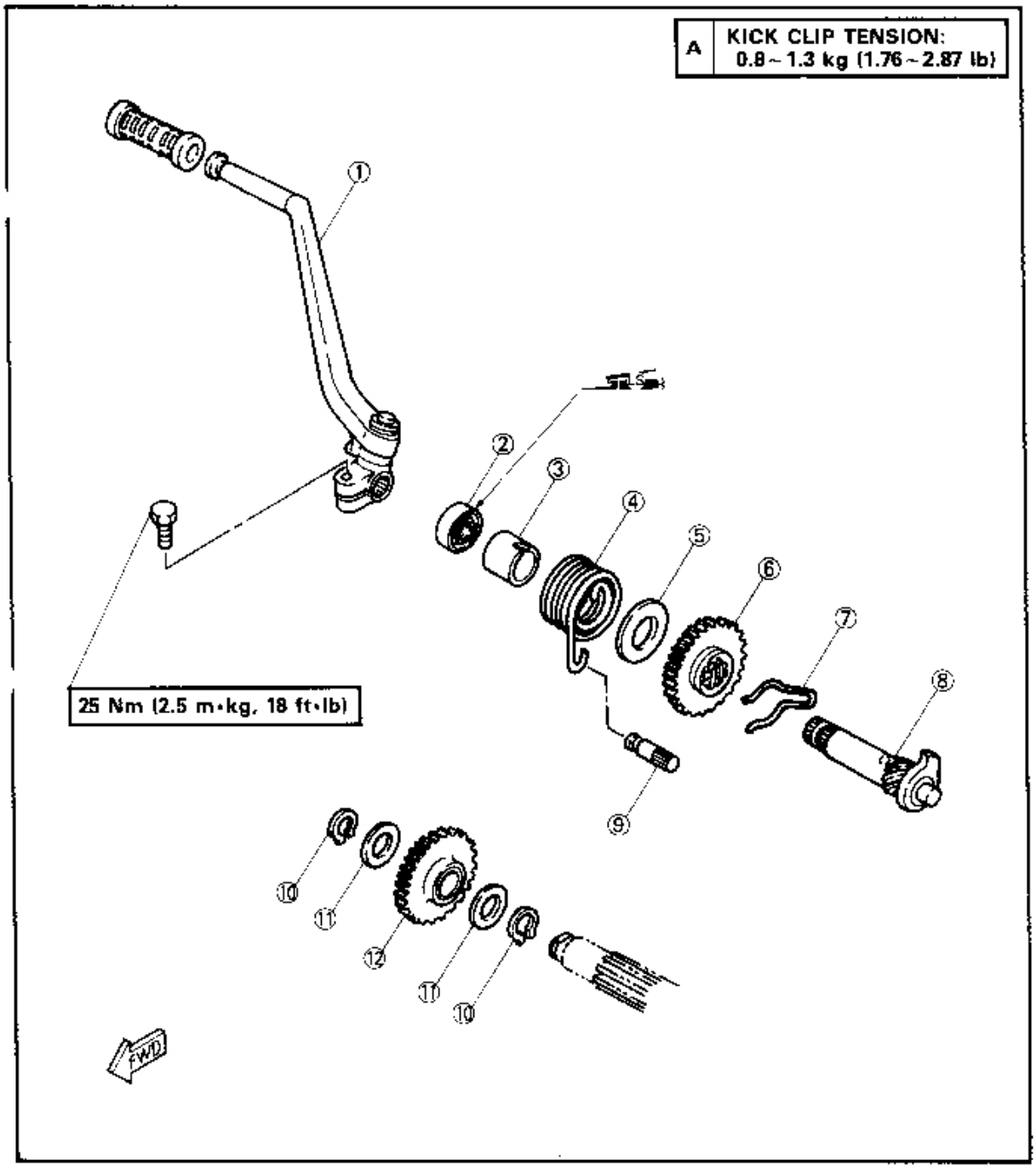
OIL PUMP AND STRAINER

① Strainer
② Strainer housing
③ O-ring
④ Oil delivery pipe
⑤ Oil pump gear
⑥ Oil pump housing
⑦ Shaft
⑧ Rotor
⑨ Oil pump cover



KICK AXLE AND KICK IDLE GEAR

① Kick crank
② Oil seal
③ Spacer
④ Spring
⑤ Washer
⑥ Kick gear
⑦ Kick clip
⑧ Kick axle
⑨ Stopper
⑩ Circlip
⑪ Washer
⑫ Kick idle gear

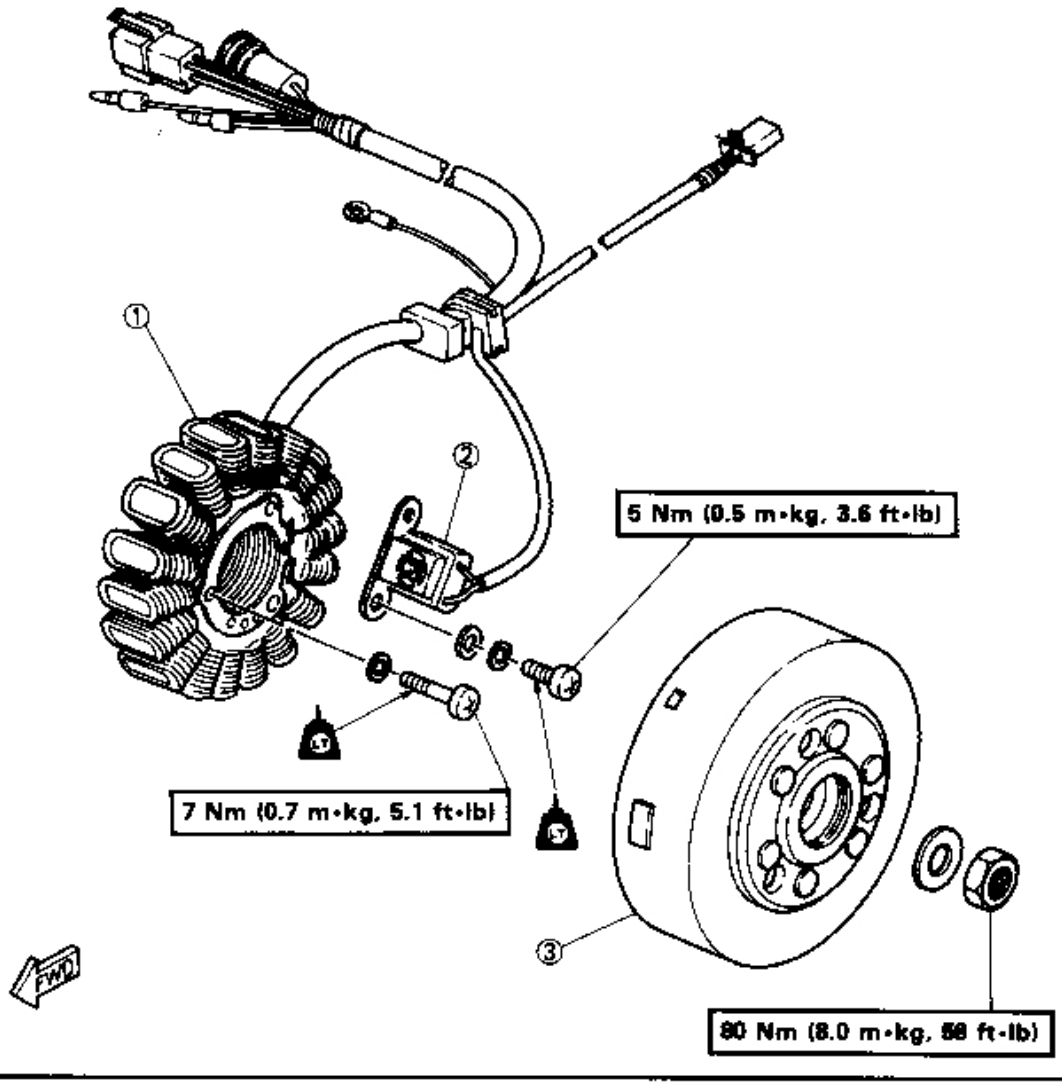


C.D.I. MAGNETO

① Stator coil
② Pickup coil
③ Rotor

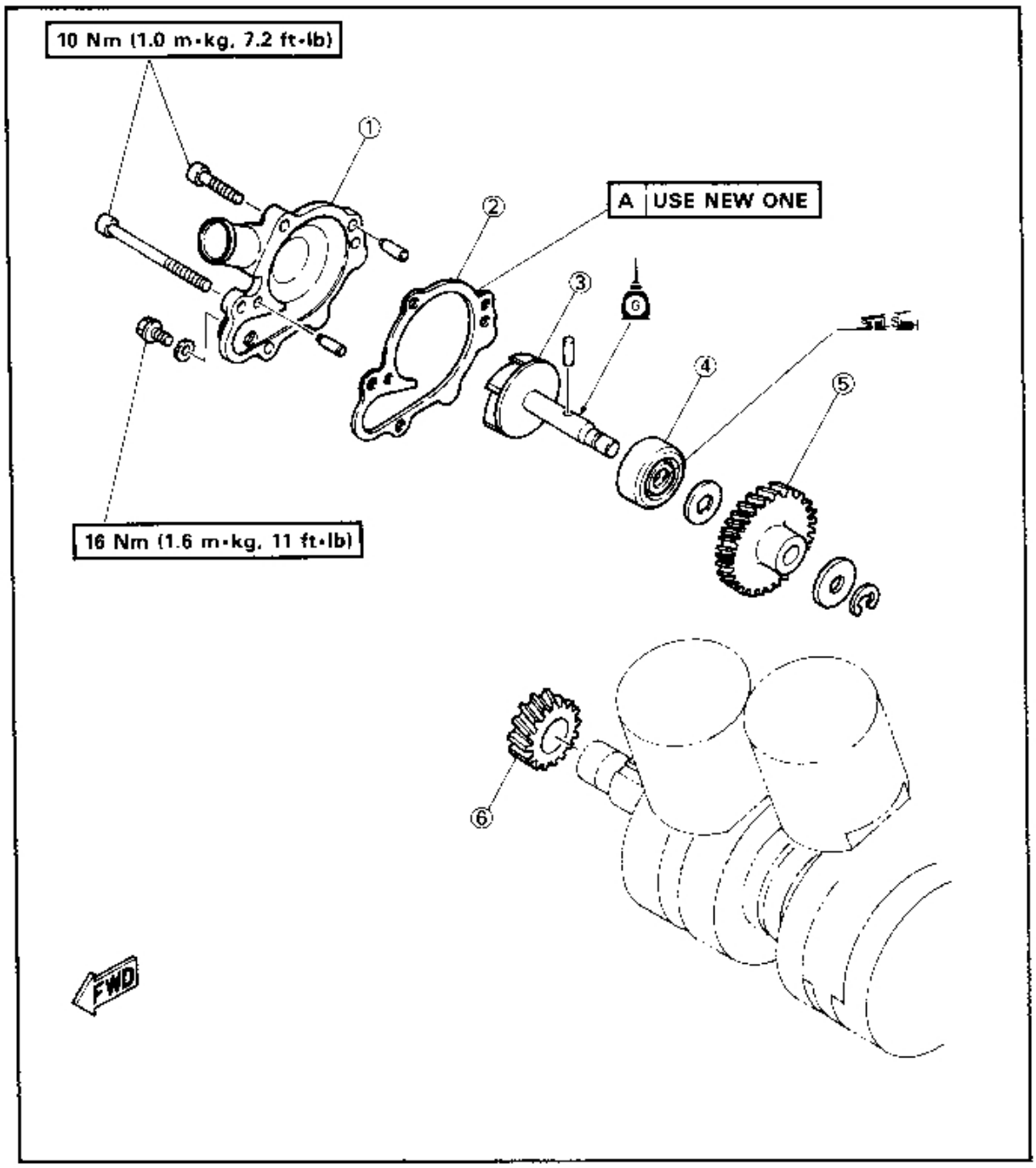
A	STATOR COIL RESISTANCE: 0.44 – 0.66Ω at 20°C (68°F) (White – White)
B	PICKUP COIL RESISTANCE: 94 – 140Ω at 20°C (68°F) (White/Green – White/Red)

C	SOURCE COIL (1) RESISTANCE: 128 – 193Ω at 20°C (68°F) (Green – Brown) SOURCE COIL (2) RESISTANCE: 3.6 – 5.4Ω at 20°C (68°F) (Brown – Red)



WATER PUMP

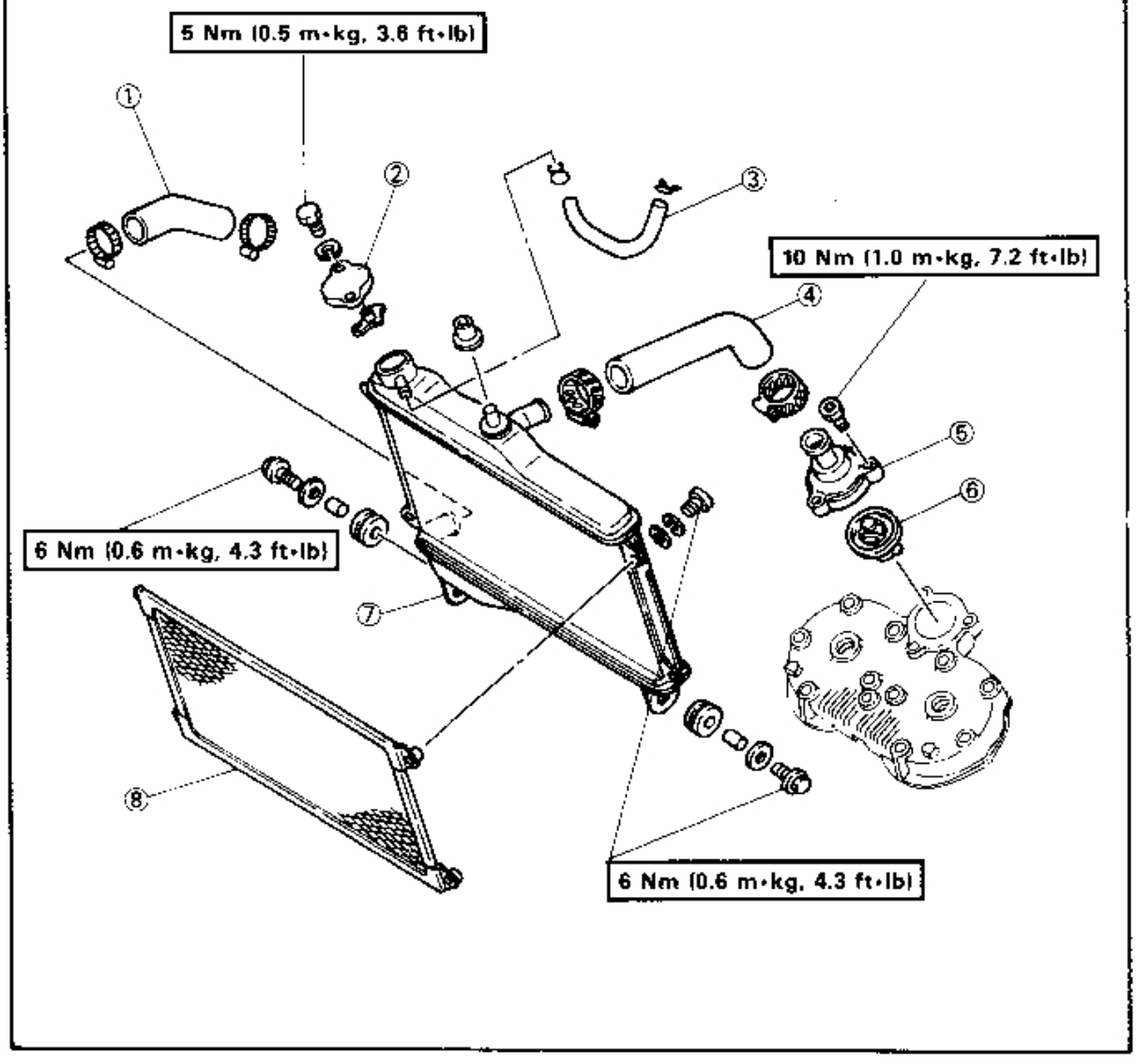
① Water pump housing cover
② Gasket
③ Impeller shaft
④ Oil seal
⑤ Impeller shaft gear
⑥ Impeller shaft drive gear



THERMOSTATIC VALVE AND RADIATOR

① Outlet hose
② Radiator cap
③ Coolant breather hose
④ Inlet hose
⑤ Thermostatic valve cover
⑥ Thermostatic valve
⑦ Radiator
⑧ Radiator cover

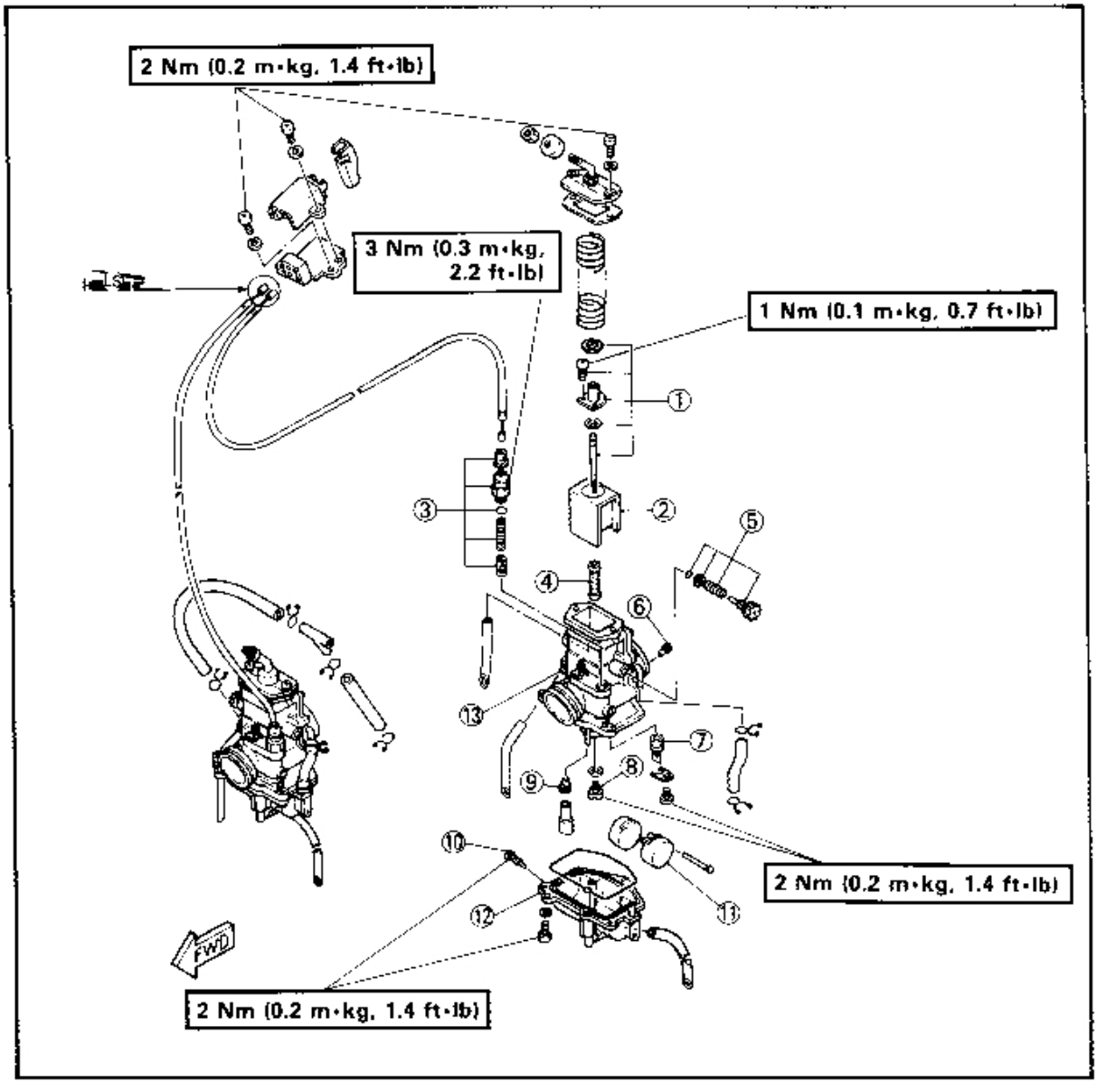
A	RADIATOR CAP OPENING PRESSURE: 75 ~ 105 kPa (0.75 ~ 1.05 kg/cm^2, 10 ~ 14 psi)
B	COOLANT CAPACITY: 1.35 L (1.19 Imp qt, 1.43 US qt) Including all routes.
C	THERMOSTATIC VALVE OPENING TEMPERATURE: 63 ~ 67°C (146 ~ 153°F)



CARBURETOR

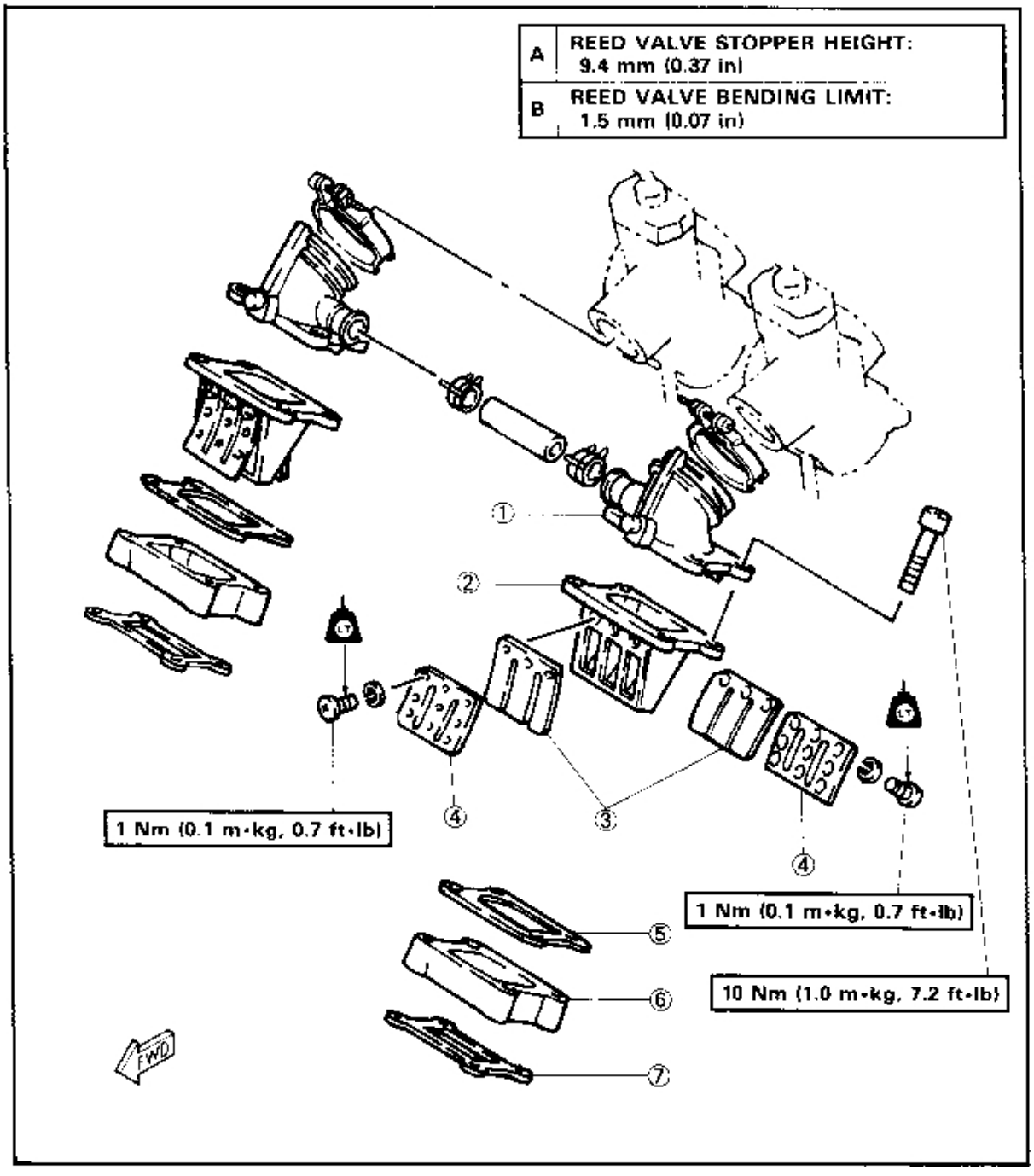
① Jet needle assembly
② Throttle valve
③ Starter plunger assembly
④ Main nozzle
⑤ Throttle stop screw assembly
⑥ Pilot air jet
⑦ Needle valve assembly
⑧ Main jet
⑨ Pilot jet
⑩ Drain screw
⑪ Float
⑫ Float chamber
⑬ Carburetor body

SPECIFICATIONS	
MAIN JET (M.J.)	#230
PILOT JET (P.J.)	#20
MAIN AIR JET (M.A.J.)	φ1.5
PILOT AIR JET (P.A.J.)	φ1.4
JET NEEDLE (J.N.)	5L19-2/5
CUTAWAY (C.A.)	2.5
STARTER JET (G.S.)	#35
MAIN NOZZLE (N.J.)	Q-2
POWER JET (PW.J.)	#60
FUEL LEVEL (F.L.)	1.1 ~ 2.1 mm (0.04 ~ 0.08 in)
FLOAT HEIGHT (F.H.)	15 ~ 17 mm (0.59 ~ 0.67 in)



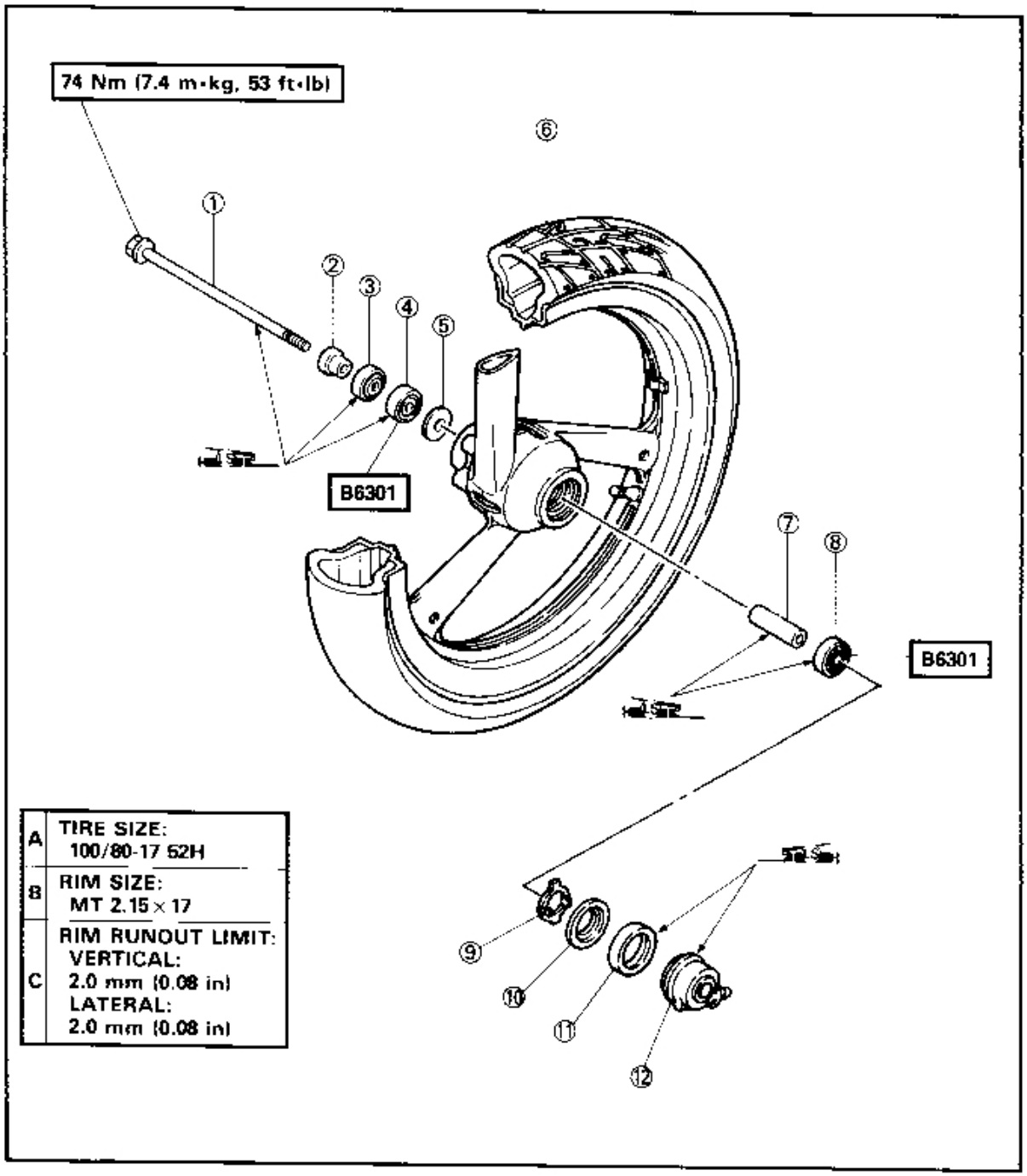
REED VALVE

① Intake manifold
② Reed valve seat
③ Reed valve
④ Reed valve stopper
⑤ Gasket
⑥ Spacer
⑦ Gasket


A REED VALVE STOPPER HEIGHT: 9.4 mm (0.37 in)
B REED VALVE BENDING LIMIT: 1.5 mm (0.07 in)
1 Nm (0.1 m·kg, 0.7 ft·lb)
1 Nm (0.1 m·kg, 0.7 ft·lb)
10 Nm (1.0 m·kg, 7.2 ft·lb)
FWD

FRONT WHEEL

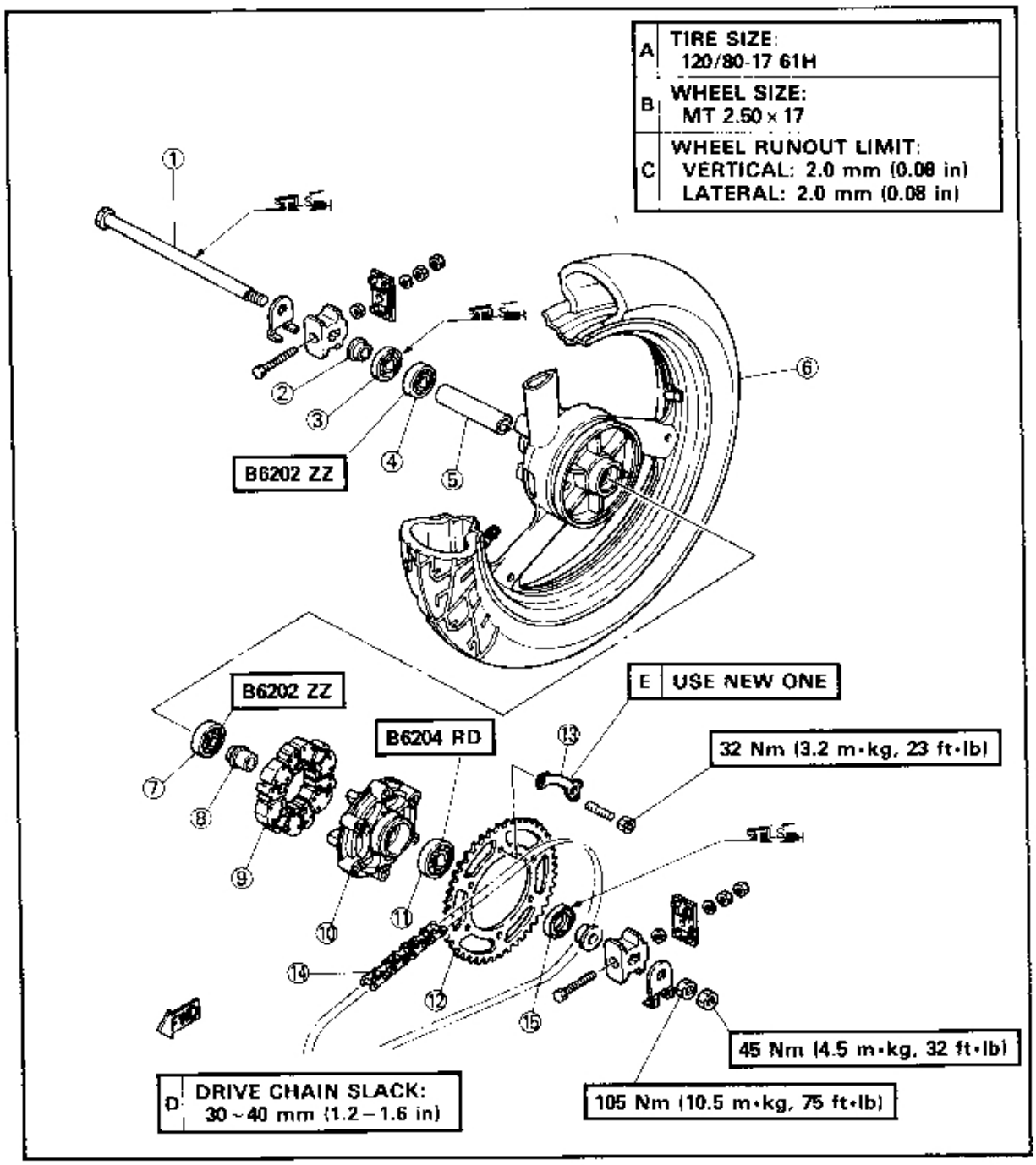
① Wheel axle
② Collar
③ Oil seal
④ Bearing
⑤ Flange spacer
⑥ Front wheel
⑦ Spacer
⑧ Bearing
⑨ Meter clutch
⑩ Clutch retainer
⑪ Oil seal
⑫ Gear unit assembly



A	TIRE SIZE: 100/80-17 52H
B	RIM SIZE: MT 2.15 × 17
C	RIM RUNOUT LIMIT: VERTICAL: 2.0 mm (0.08 in) LATERAL: 2.0 mm (0.08 in)

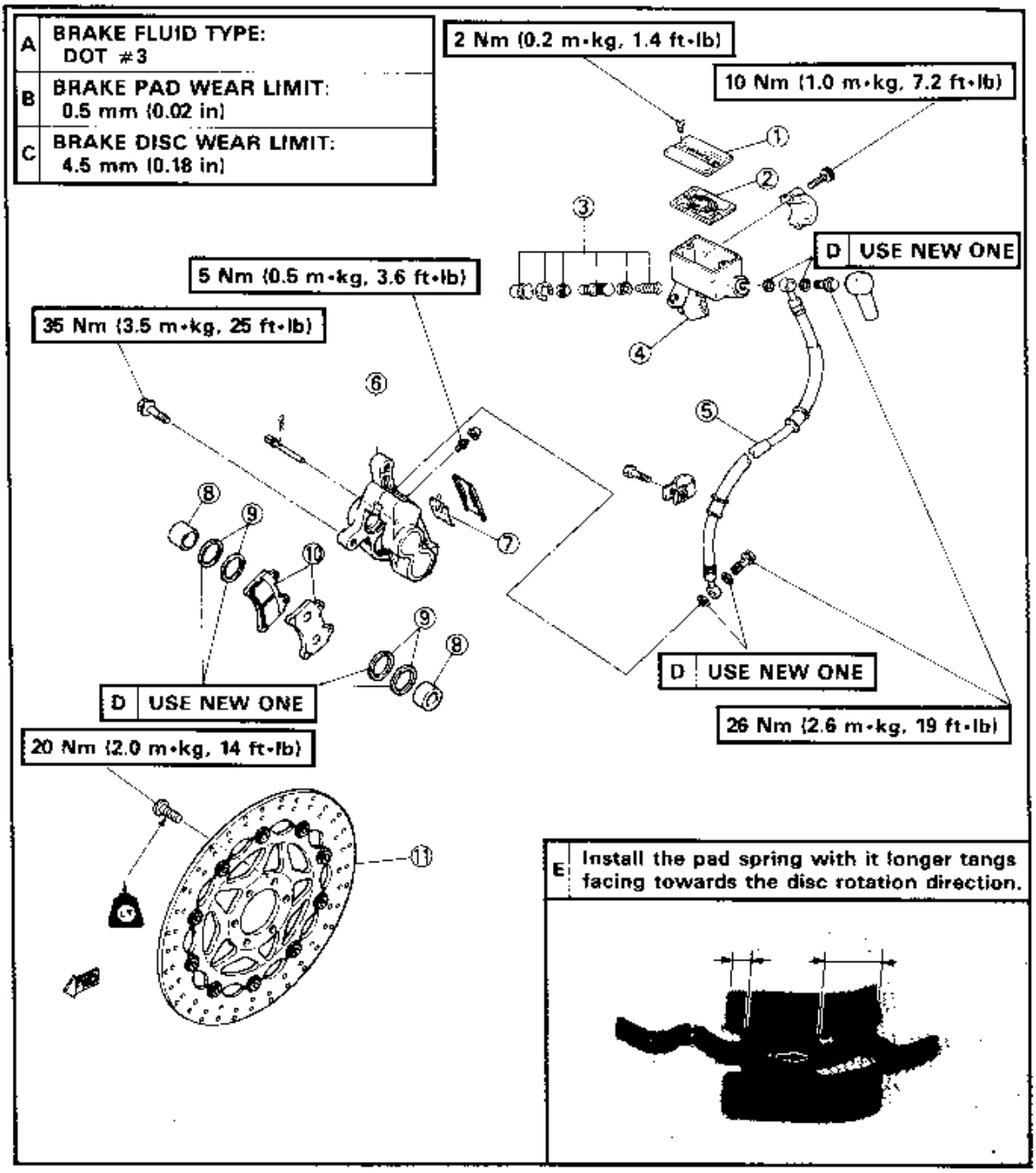
REAR WHEEL

① Wheel axle
② Flange collar
③ Oil seal
④ Bearing
⑤ Collar
⑥ Rear wheel
⑦ Bearing
⑧ Flange collar
⑨ Damper
⑩ Hub
⑪ Bearing
⑫ Driven sprocket
⑬ Lock washer
⑭ Drive chain
⑮ Oil seal

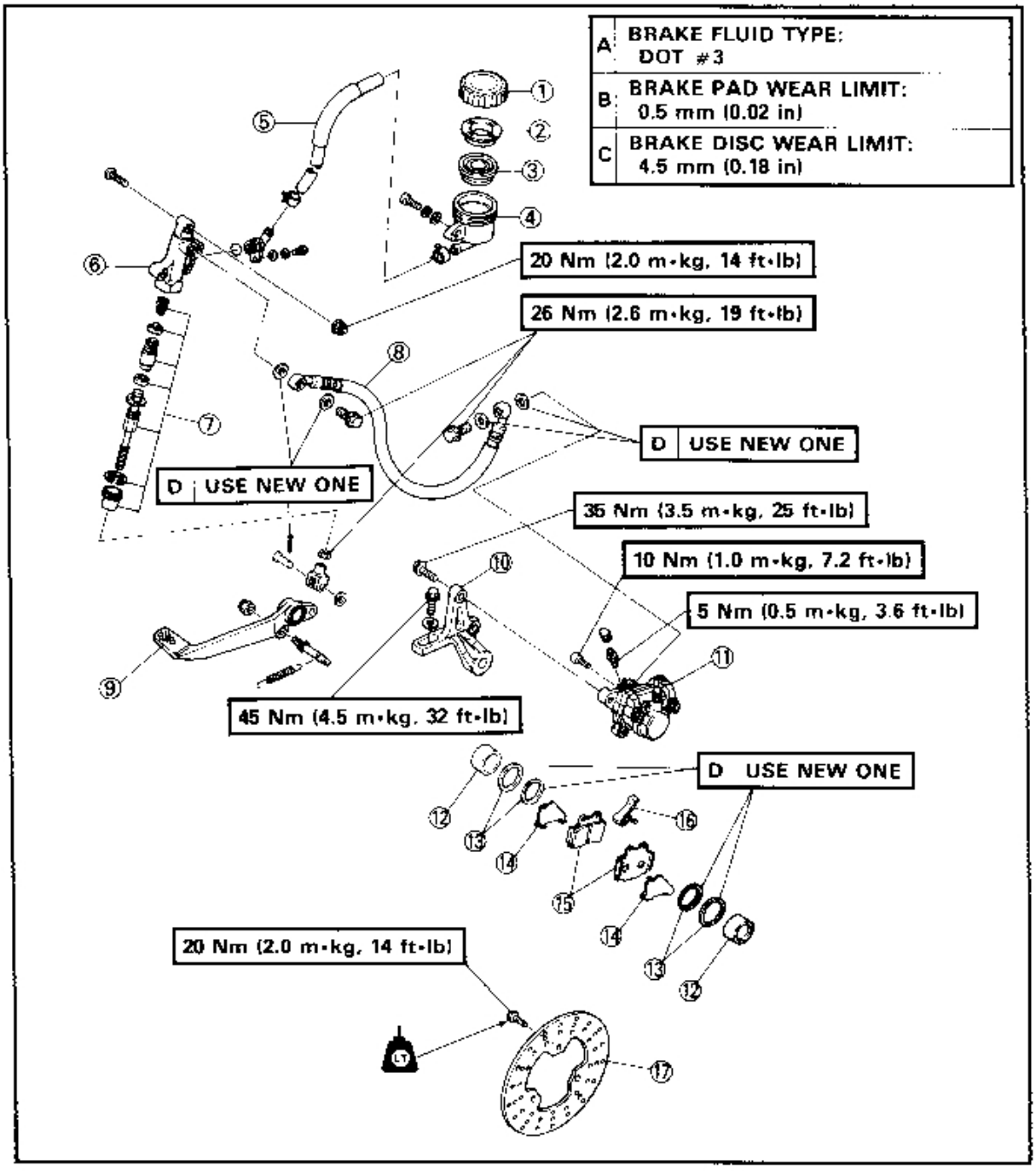

A TIRE SIZE: 120/80-17 61H
B WHEEL SIZE: MT 2.50 × 17
C WHEEL RUNOUT LIMIT: VERTICAL: 2.0 mm (0.08 in) LATERAL: 2.0 mm (0.08 in)
B6202 ZZ
B6202 ZZ
B6204 RD
E USE NEW ONE
32 Nm (3.2 m·kg, 23 ft·lb)
45 Nm (4.5 m·kg, 32 ft·lb)
105 Nm (10.5 m·kg, 75 ft·lb)
D DRIVE CHAIN SLACK: 30 ~ 40 mm (1.2 – 1.6 in)

FRONT AND REAR BRAKE

① Master cylinder cap
② Rubber seal
③ Master cylinder kit
④ Master cylinder
⑤ Brake hose
⑥ Brake caliper
⑦ Pad spring
⑧ Piston
⑨ Piston seal
⑩ Brake pad
⑪ Brake disc


A BRAKE FLUID TYPE: DOT #3
B BRAKE PAD WEAR LIMIT: 0.5 mm (0.02 in)
C BRAKE DISC WEAR LIMIT: 4.5 mm (0.18 in)
2 Nm (0.2 m•kg, 1.4 ft•lb)
10 Nm (1.0 m•kg, 7.2 ft•lb)
D USE NEW ONE
5 Nm (0.5 m•kg, 3.6 ft•lb)
35 Nm (3.5 m•kg, 25 ft•lb)
D USE NEW ONE
D USE NEW ONE
26 Nm (2.6 m•kg, 19 ft•lb)
20 Nm (2.0 m•kg, 14 ft•lb)
E Install the pad spring with it longer tangs facing towards the disc rotation direction.

① Reservoir tank cap
② Bush
③ Diaphragm
④ Reservoir tank
⑤ Reservoir hose
⑥ Master cylinder
⑦ Master cylinder kit
⑧ Brake hose
⑨ Brake pedal
⑩ Caliper bracket
⑪ Brake caliper
⑫ Piston
⑬ Piston seal
⑭ Shim
⑮ Brake pad
⑯ Pad spring
⑰ Brake disc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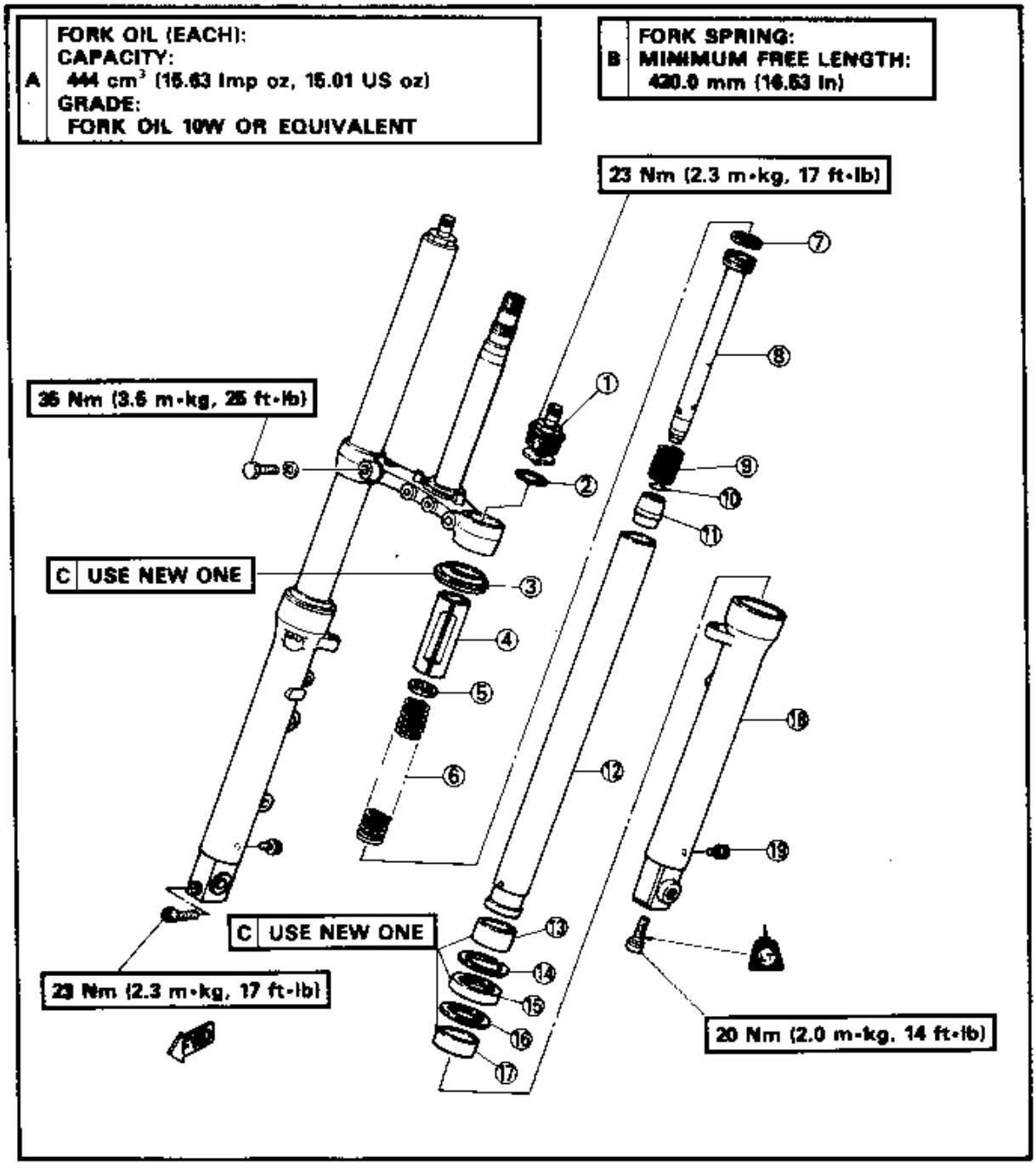
20 Nm (2.0 m•kg, 14 ft•lb)
26 Nm (2.6 m•kg, 19 ft•lb)
D USE NEW ONE
D USE NEW ONE
35 Nm (3.5 m•kg, 25 ft•lb)
10 Nm (1.0 m•kg, 7.2 ft•lb)
5 Nm (0.5 m•kg, 3.6 ft•lb)
45 Nm (4.5 m•kg, 32 ft•lb)
D USE NEW ONE
20 Nm (2.0 m•kg, 14 ft•lb)
G

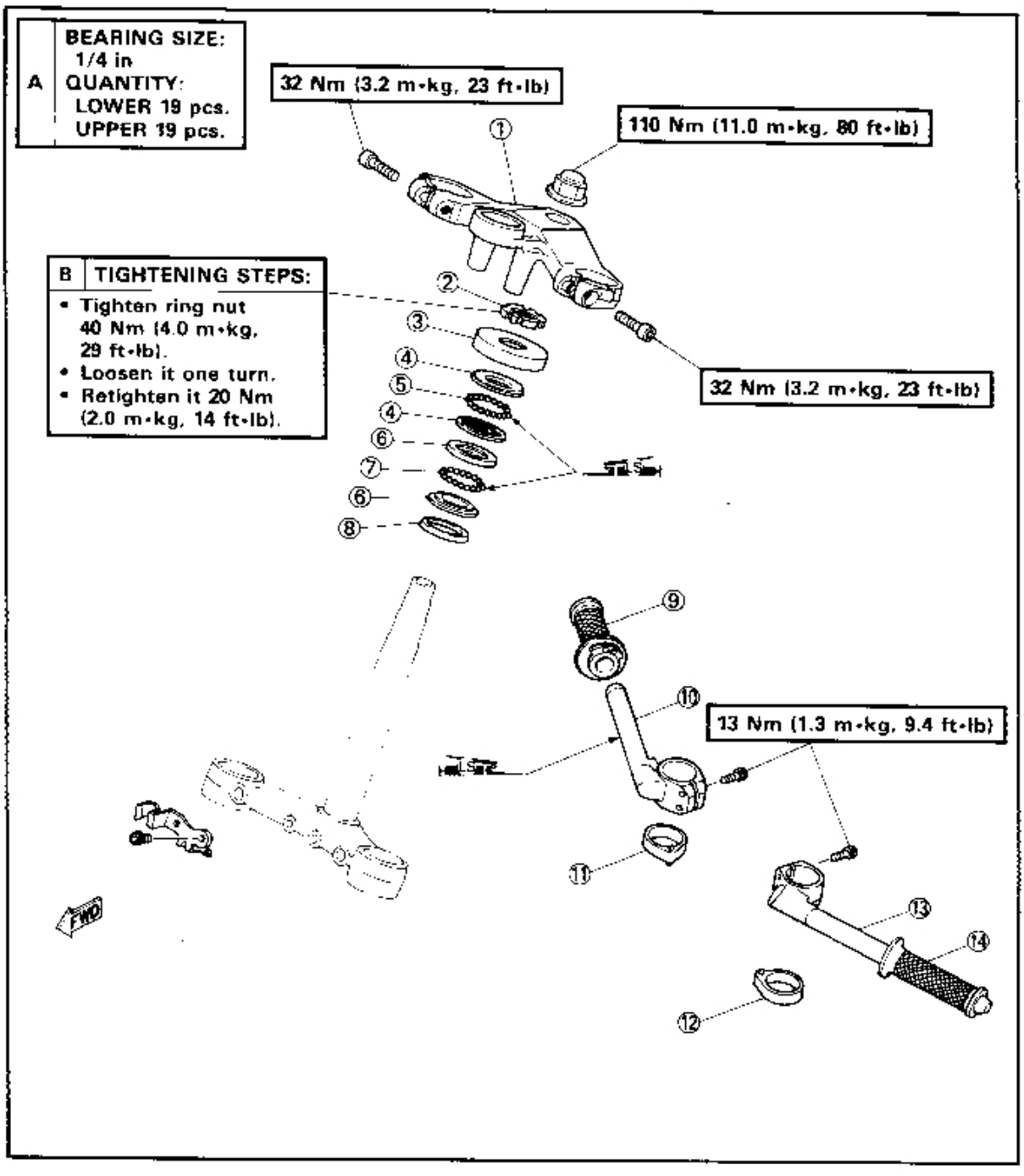
FRONT FORK

① Cap bolt
② O-ring
③ Dust seal
④ Spacer
⑤ Spring seat
⑥ Fork spring
⑦ Piston ring
⑧ Damper rod
⑨ Rebound spring
⑩ Circlip
⑪ Oil lock pieces
⑫ Inner fork tube
⑬ Slide metal
⑭ Retaining clip
⑮ Oil seal
⑯ Washer
⑰ Guide bush
⑱ Outer fork tube
⑲ Drain screw


A FORK OIL (EACH):
CAPACITY:
444 cm³ (15.63 Imp oz, 15.01 US oz)
GRADE:
FORK OIL 10W OR EQUIVALENT
B FORK SPRING:
MINIMUM FREE LENGTH:
420.0 mm (16.53 in)
23 Nm (2.3 m•kg, 17 ft•lb)
35 Nm (3.5 m•kg, 25 ft•lb)
C USE NEW ONE
C USE NEW ONE
23 Nm (2.3 m•kg, 17 ft•lb)
20 Nm (2.0 m•kg, 14 ft•lb)

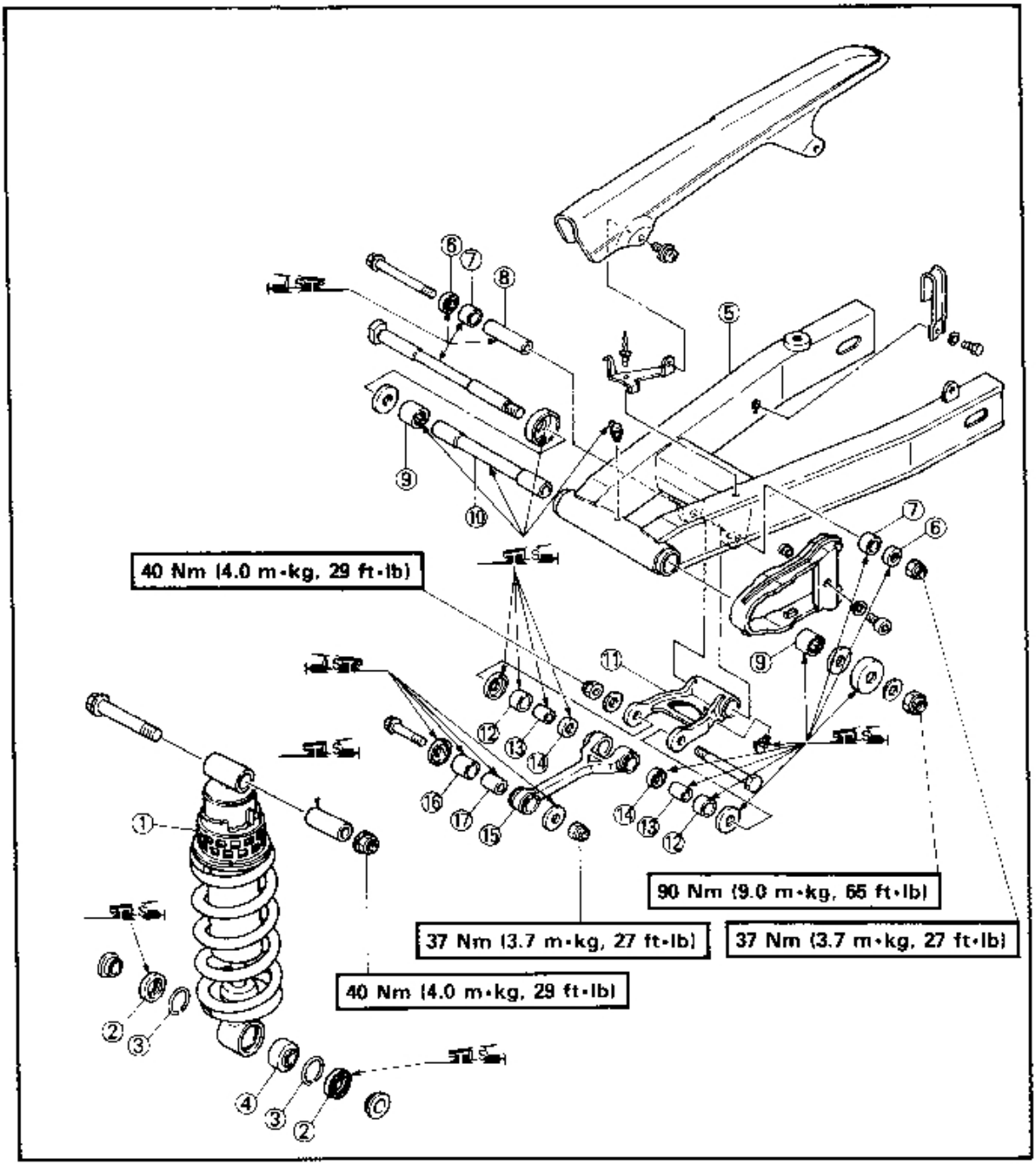
STEERING HEAD AND HANDLEBARS

① Handle crown
② Ring nut
③ Ball race cover
④ Upper bearing race
⑤ Ball bearing
⑥ Lower bearing race
⑦ Ball bearing
⑧ Dust seal
⑨ Handlebar grip (Right-hand)
⑩ Handlebar (Right-hand)
⑪ Spacer
⑫ Spacer
⑬ Handlebar (Left-hand)
⑭ Handlebar grip (Left-hand)


A
BEARING SIZE:
1/4 in
QUANTITY:
LOWER 19 pcs.
UPPER 19 pcs.
32 Nm (3.2 m•kg, 23 ft•lb)
110 Nm (11.0 m•kg, 80 ft•lb)
B
TIGHTENING STEPS:
• Tighten ring nut 40 Nm (4.0 m•kg, 29 ft•lb).
• Loosen it one turn.
• Retighten it 20 Nm (2.0 m•kg, 14 ft•lb).
32 Nm (3.2 m•kg, 23 ft•lb)
13 Nm (1.3 m•kg, 9.4 ft•lb)
FWD

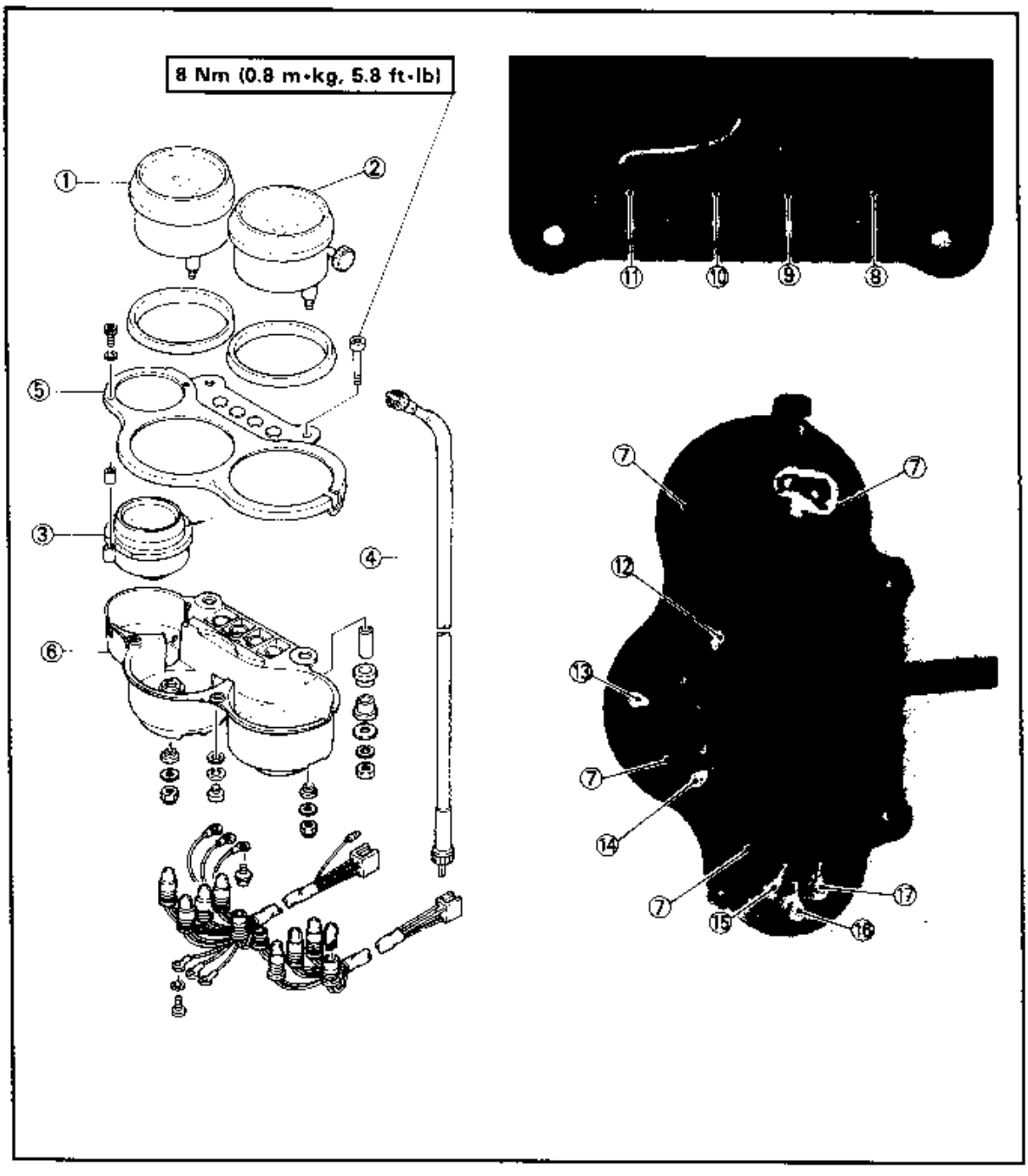
REAR SHOCK ABSORBER AND SWINGARM

① Rear shock absorber
② Oil seal
③ Circlip
④ Bearing
⑤ Swingarm
⑥ Oil seal
⑦ Bearing
⑧ Collar
⑨ Bearing
⑩ Bush
⑪ Connecting arm
⑫ Bush
⑬ Collar
⑭ Oil seal
⑮ Relay arm
⑯ Bush
⑰ Collar



METER ASSEMBLY

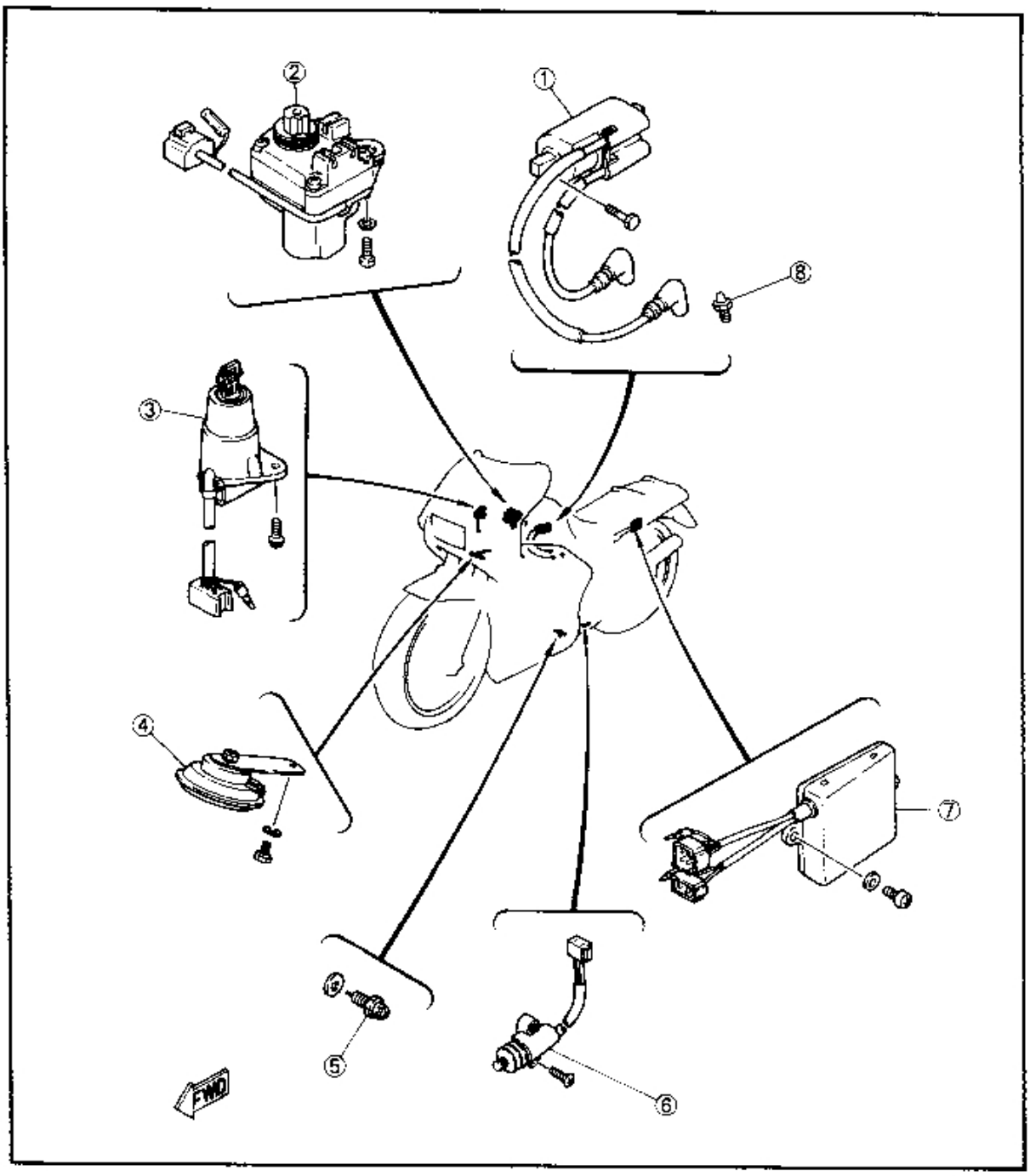
① Tachometer
② Speedometer
③ Temperature gauge
④ Speedometer cable
⑤ Meter panel
⑥ Meter housing
⑦ Meter light
⑧ "OIL" indicator light
(With Brown and Black/Red leads)
⑨ "NEUTRAL" indicator light
(With Brown and Sky blue leads)
⑩ "TURN" indicator light
(With Dark green and Chocolate leads)
⑪ "HIGH BEAM" indicator light
(With Yellow and Black leads)
⑫ Brown lead
⑬ Gray lead
⑭ Black lead
⑮ Green/Red lead
⑯ Black lead
⑰ Brown lead



ELECTRICAL COMPONENTS

① Ignition coil
② Servomotor
③ Main switch
④ Horn
⑤ Neutral switch
⑥ Sidestand switch
⑦ Y.P.V.S. control unit
⑧ Thermo unit

IGNITION COIL:
PRIMARY COIL RESISTANCE
0.26 ~ 0.40Ω at 20°C (68°F)
SECONDARY COIL RESISTANCE
4.7 ~ 7.0 kΩ at 20°C (68°F)

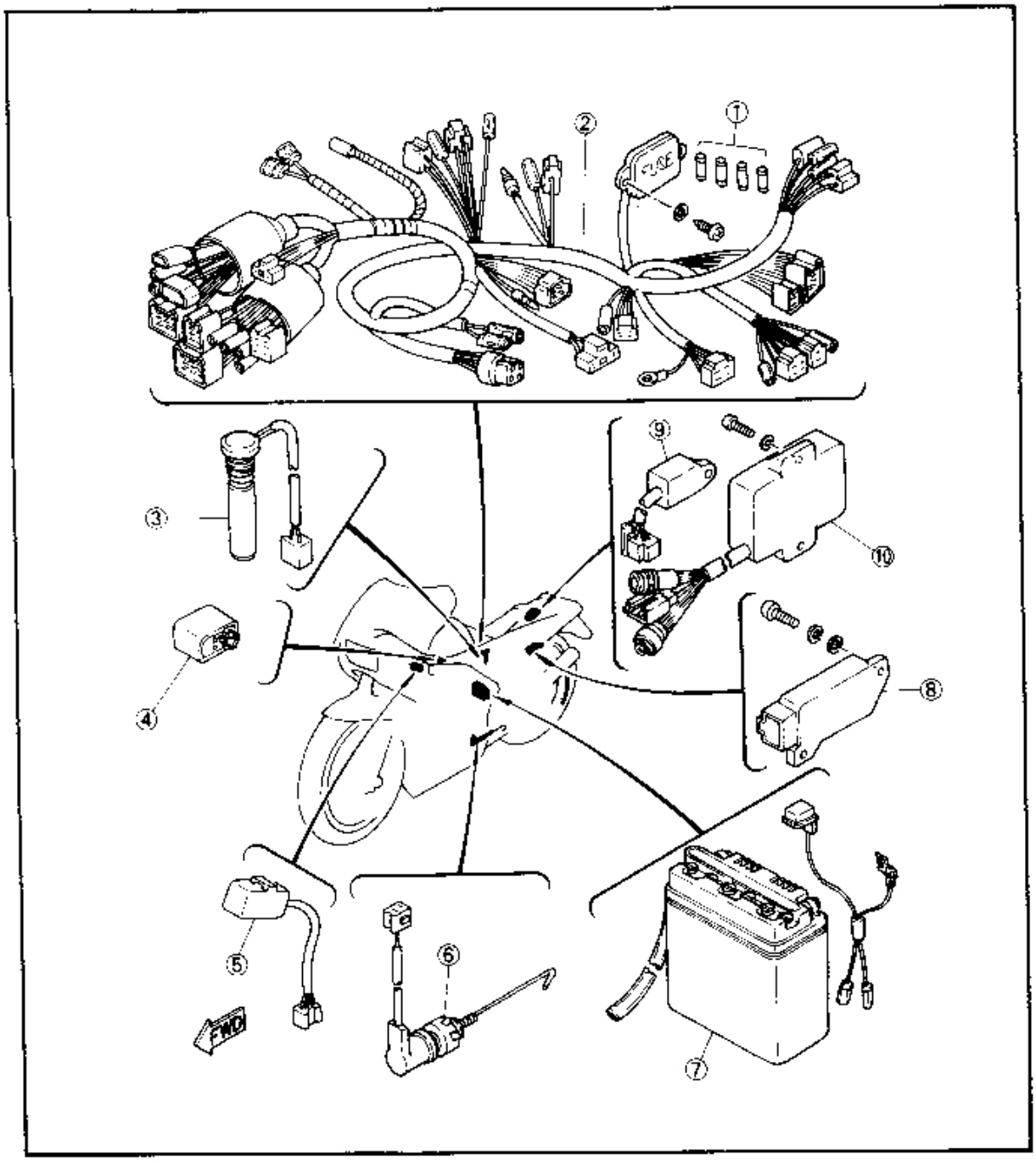


ELECTRICAL COMPONENTS

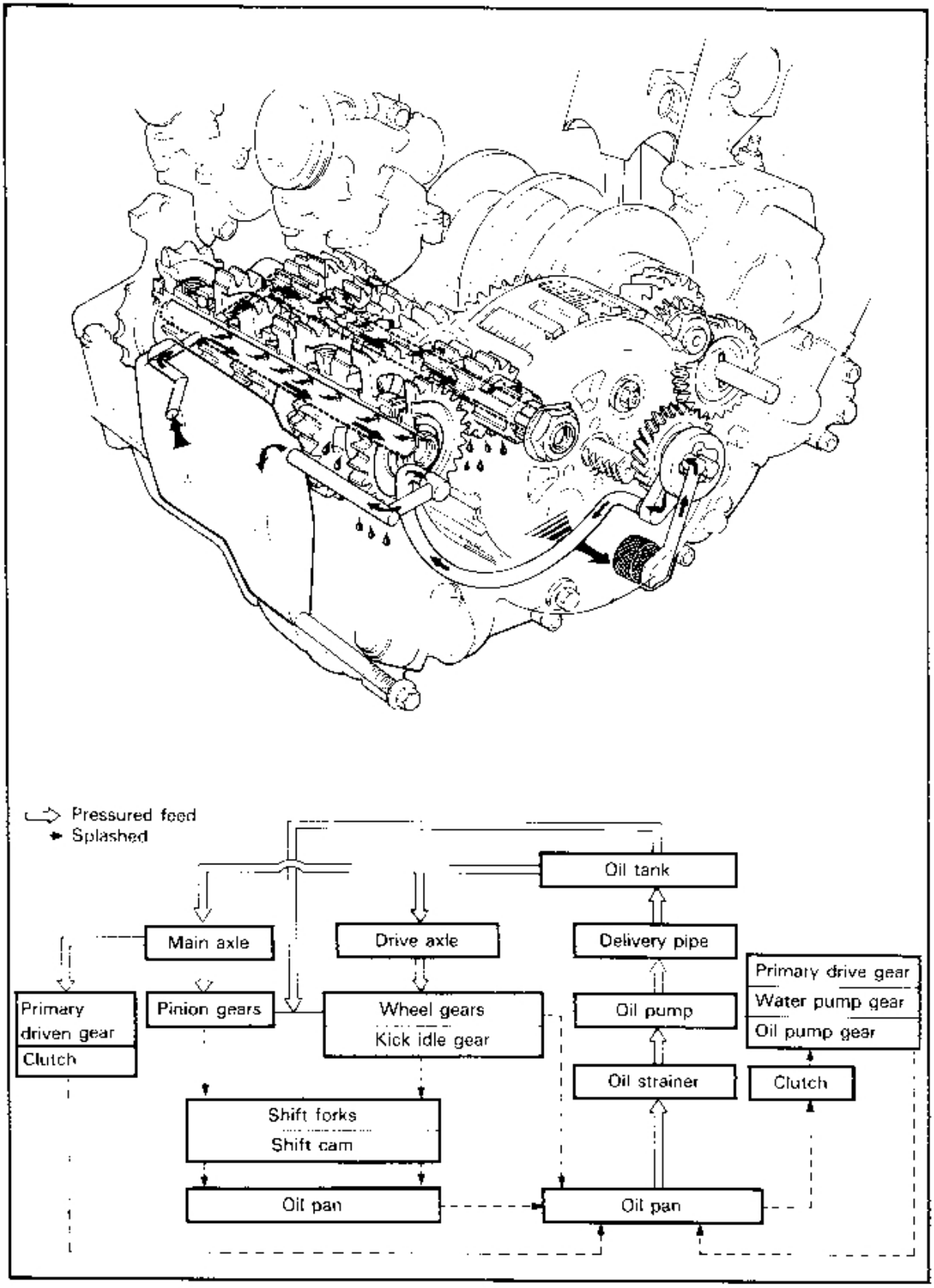
ELEC

① Fuse
② Wire harness
③ Oil level gauge
④ Flasher relay
⑤ Cancelling unit (Except for Germany)
⑥ Brake switch
⑦ Battery
⑧ Rectifier/Regulator
⑨ Ignition control unit
⑩ C.D.I. unit

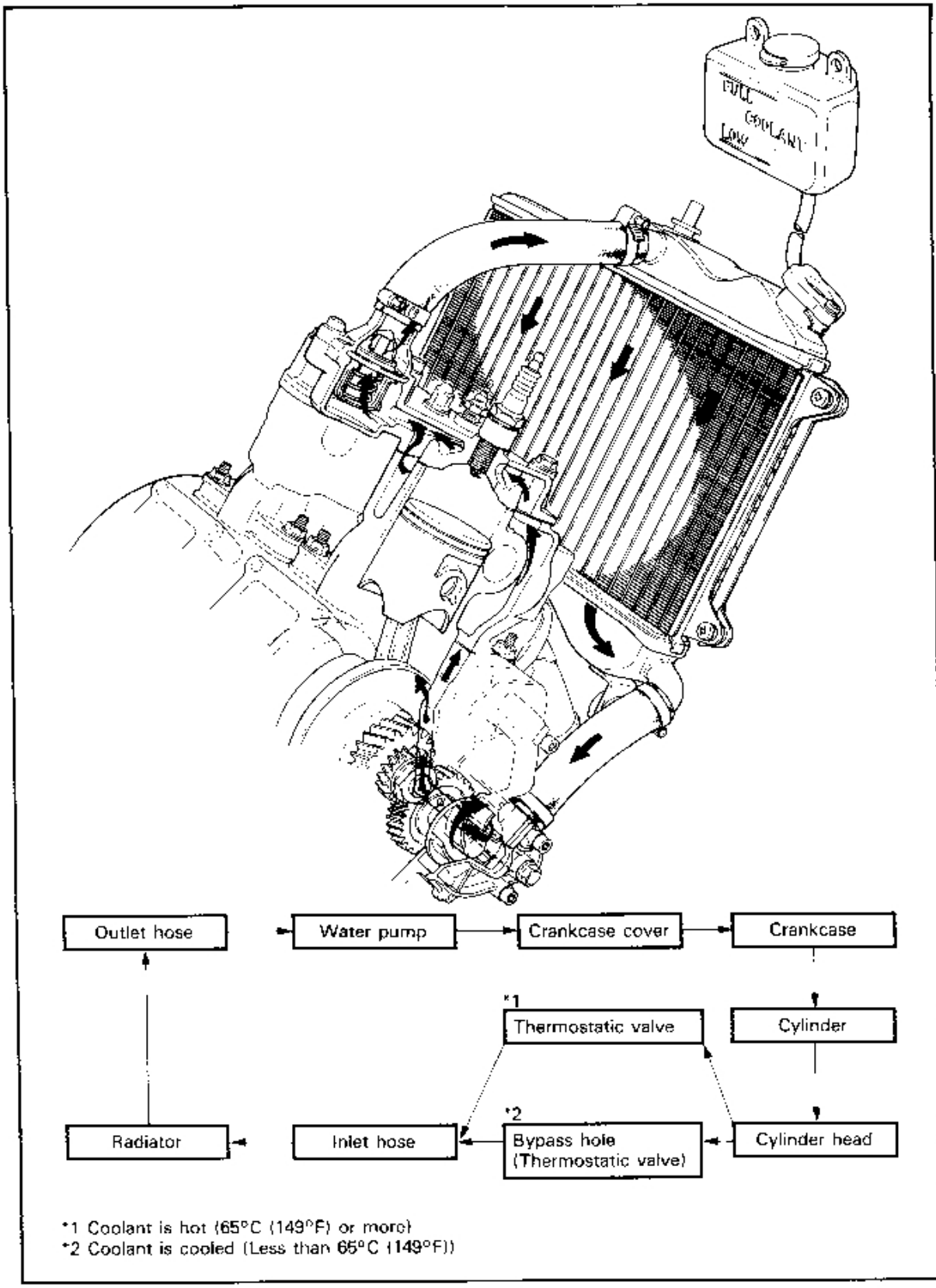
BATTERY:
CAPACITY
12V 4AH
SPECIFIC GRAVITY
1.280



LUBRICATION DIAGRAM

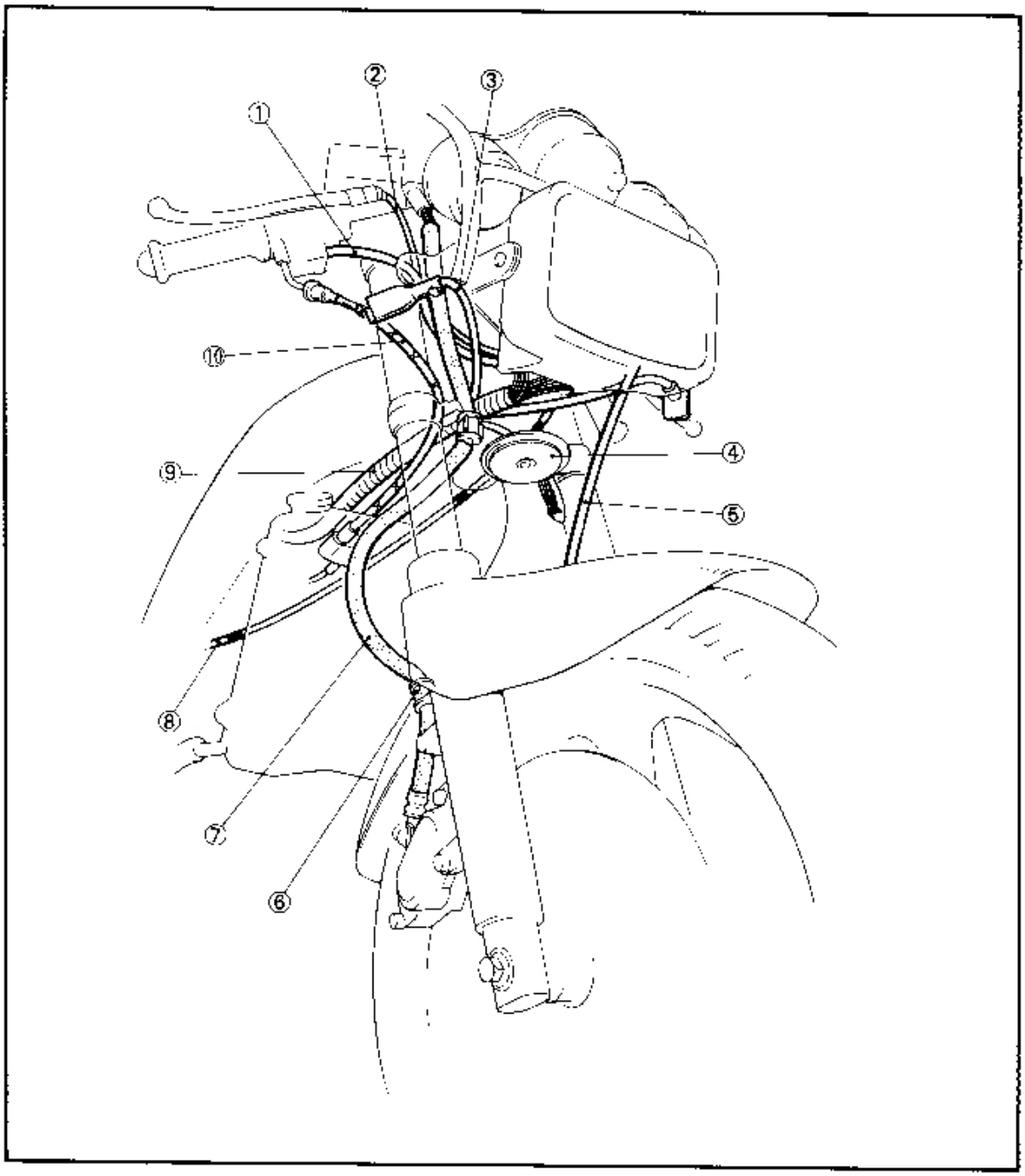


COOLANT FLOW CHART



CABLE ROUTING

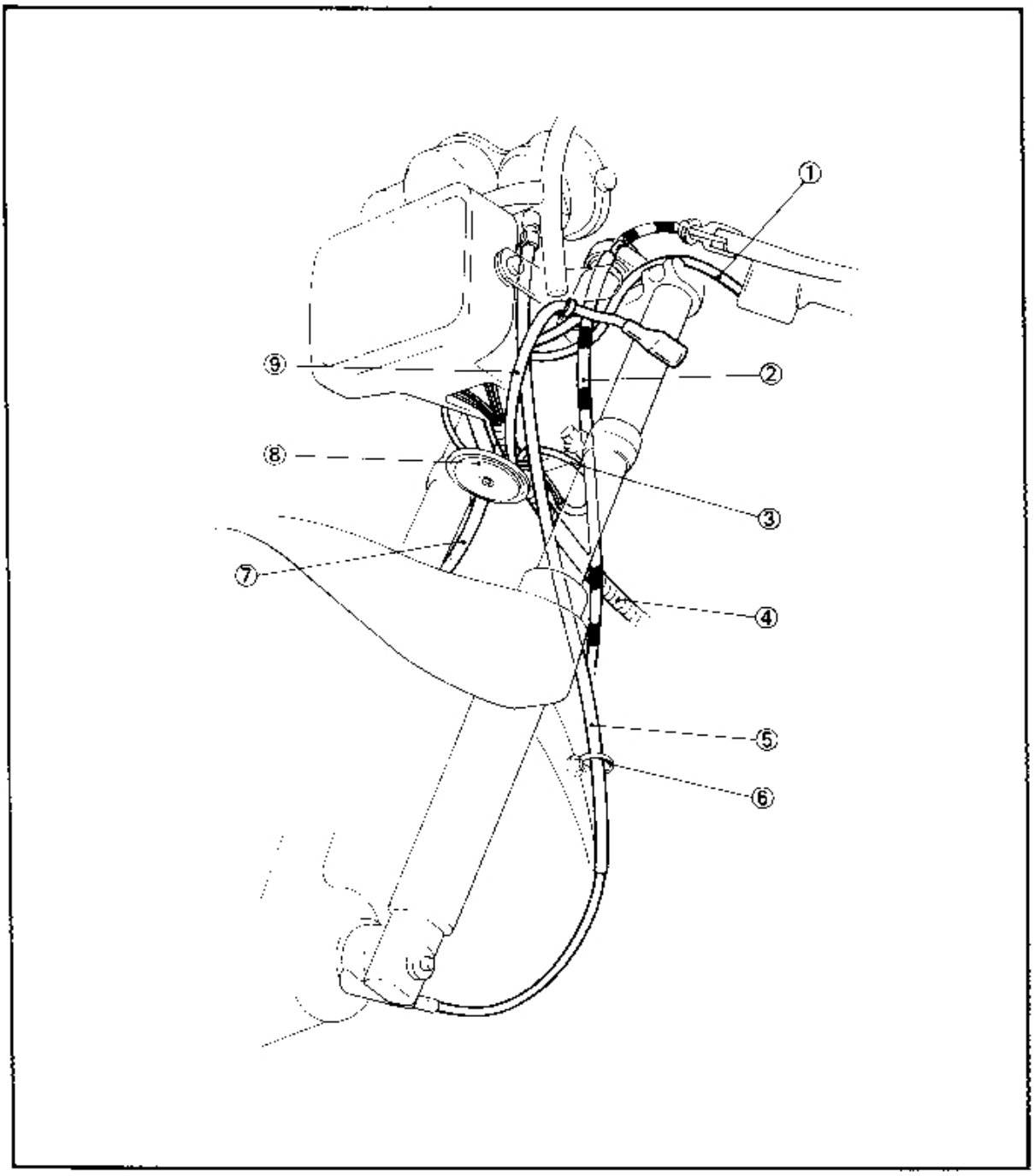
① Handlebar switch lead (Right)
② Front brake switch lead
③ Front flasher light lead (Right)
④ Horn
⑤ Speedometer cable
⑥ Clamp
⑦ Brake hose
⑧ Clutch cable
⑨ Wire harness
⑩ Throttle cable



CABLE ROUTING

SPEC

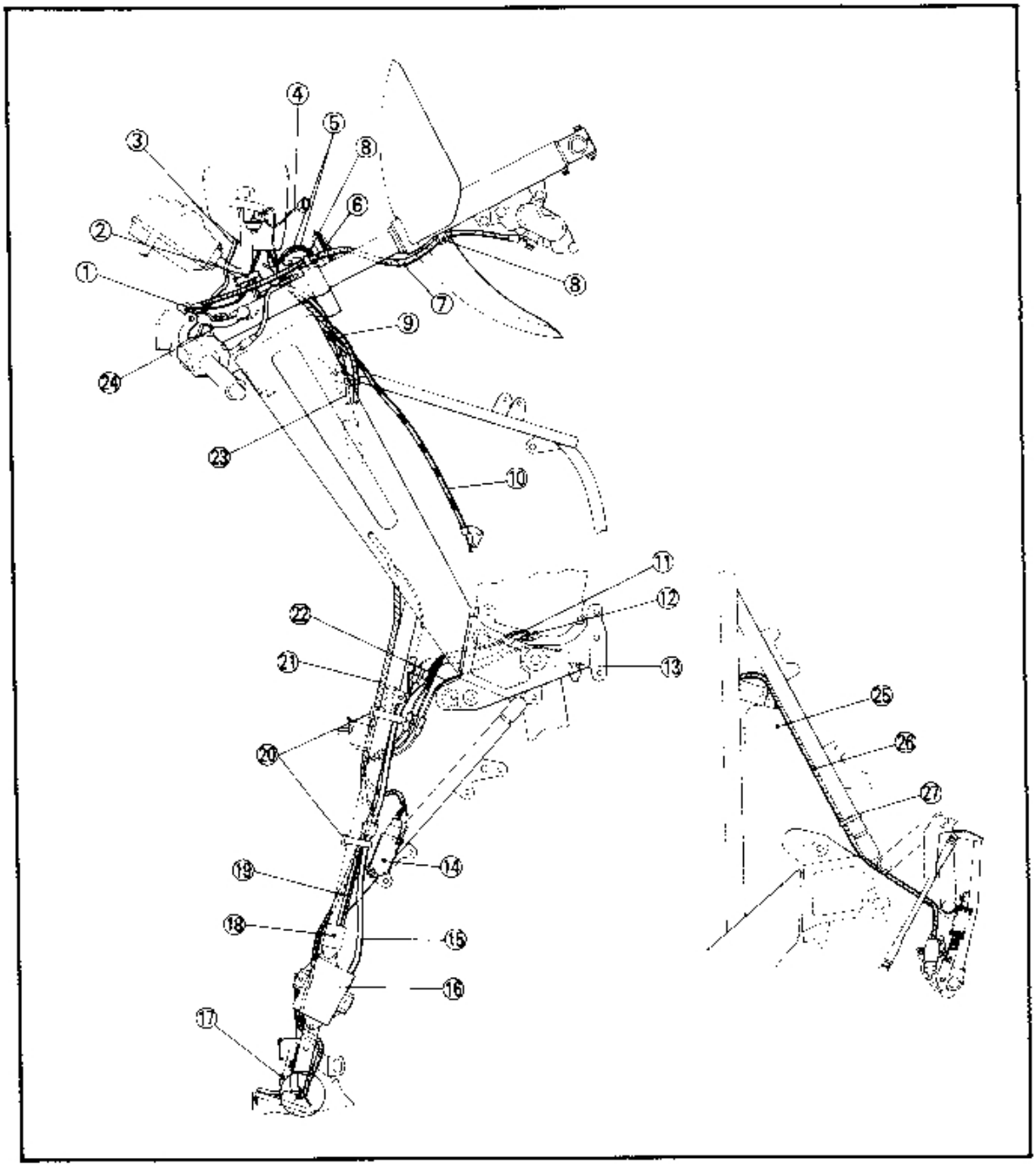
① Handlebar switch lead (Left)
② Clutch cable
③ Horn lead
④ Wire harness
⑤ Speedometer cable
⑥ Clamp
⑦ Brake hose
⑧ Horn
⑨ Front flasher light lead (Left)



CABLE ROUTING

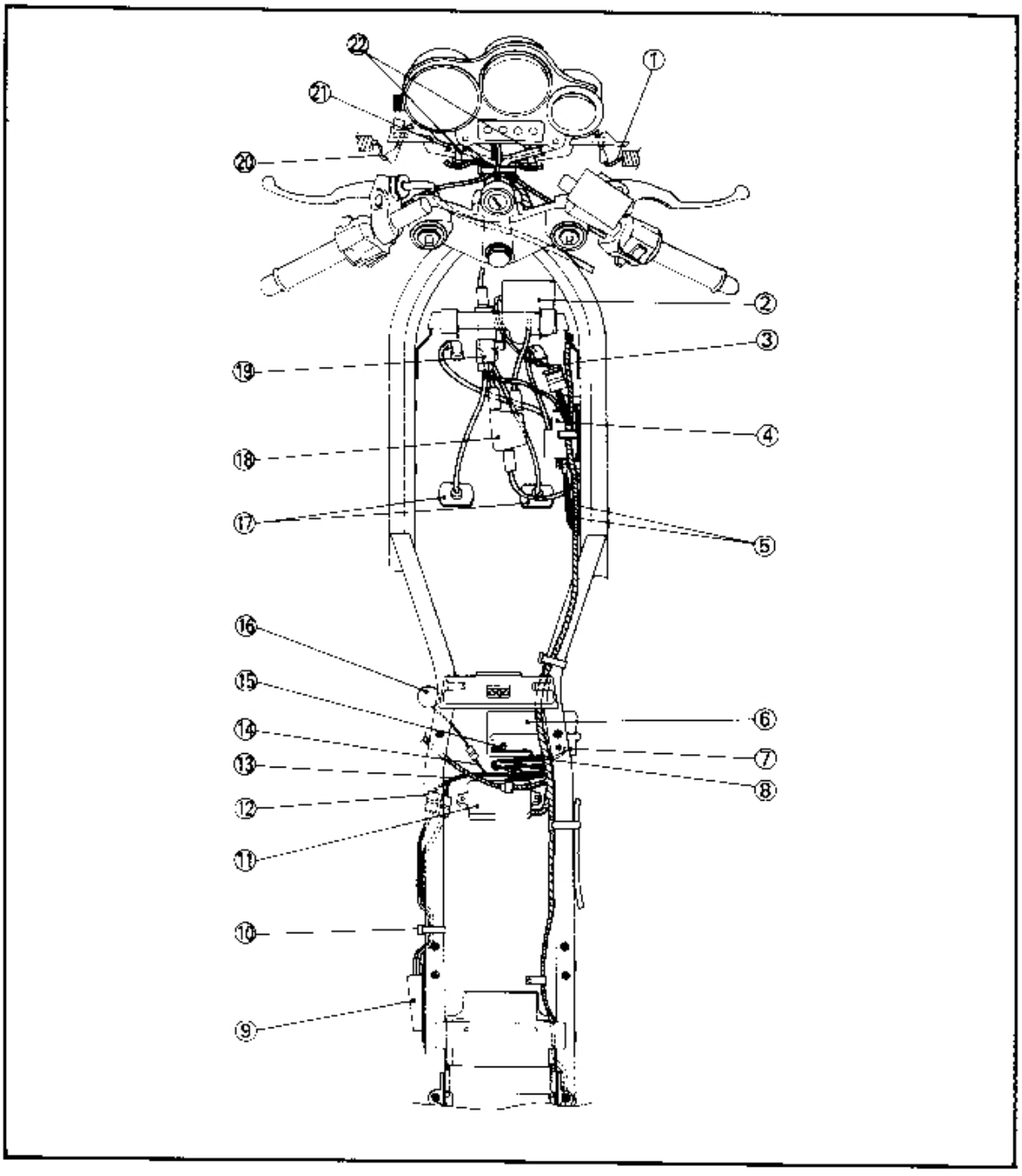
SPEC

① Front brake switch lead
② Band
③ Main switch lead
④ Front flasher light lead (Right)
⑤ Horn lead
⑥ Horn
⑦ Brake hose
⑧ Clamp
⑨ Wire harness
⑩ Clutch cable
⑪ Pickup coil lead
⑫ Stator coil lead
⑬ Rear brake switch
⑭ Rectifier/Regulator
⑮ C.D.I. unit lead
⑯ C.D.I. unit
⑰ Fender stay 1
⑱ Ignition control unit
⑲ Sidestand switch lead
⑳ Band
㉑ Wire harness
㉒ Rear brake switch lead
㉓ Throttle cable
㉔ Handlebar switch lead (Right)
㉕ Oil tank
㉖ Sidestand switch lead
㉗ Band



CABLE ROUTING

① Front flasher light lead (Right)
② Servomotor
③ Servomotor lead
④ Ignition coil
⑤ Ignition coil lead
⑥ Battery
⑦ Battery ⊖ terminal
⑧ Battery ⊕ lead
⑨ Control unit
⑩ Band
⑪ Fuse box
⑫ Sidestand switch lead
⑬ Control unit lead
⑭ Oil level gauge lead
⑮ Battery ⊖ terminal
⑯ Oil level gauge
⑰ Carburetor
⑱ Wire cylinder assembly
⑲ Flasher relay
⑳ Front flasher light lead (Left)
㉑ Main switch lead
㉒ Band



SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	TZR250
Model Code Number:	2MA
Frame Starting Number:	2MA-000101
Engine Starting Number:	2MA-000101
Dimensions:	
Overall Length	2,055 mm (80.9 in) (Except for France) 2,005 mm (78.9 in) (For France)
Overall Width	660 mm (26.0 in)
Overall Height	1,135 mm (44.7 in)
Seat Height	760 mm (29.9 in)
Wheelbase	1,375 mm (54.1 in)
Minimum Ground Clearance	135 mm (5.3 in)
Basic Weight:	
With Oil and Full Fuel Tank	144 kg (317 lb)
Minimum Turning Radius:	2,800 mm (110.2 in)
Engine:	
Engine Type	Liquid cooled 2-stroke
Induction System	Reed valve
Cylinder Arrangement	Forward inclined parallel 2-cylinder
Displacement	249 cm^3
Bore × Stroke	56.4 × 50.0 mm (2.22 × 1.97 in)
Compression Ratio	5.9 : 1
Starting System	Kick starter
Lubrication System:	
Type	Separate lubrication (Yamaha Autolube)
Engine Oil Type	Yamaha Oil 2T or air cooled 2 stroke engine oil
Transmission Oil Type	SAE 10W30 type SE motor
Oil Capacity:	
Engine Oil (Oil Tank)	1.4 L (1.23 Imp qt, 1.48 US qt)
Transmission Oil	
Periodic Oil Change	1.0 L (0.9 Imp qt, 1.1 US qt)
Total Amount	1.0 L (0.9 Imp qt, 1.1 US qt)
Coolant Capacity:	
Including All Routes	1.35 L (1.19 Imp qt, 1.43 US qt)
Air Filter:	
Type	Wet element

GENERAL SPECIFICATIONS

SPEC

Model	TZR250		
Fuel:			
Type	Premium gasoline		
Fuel Tank Capacity			
Full Amount	16.0 L (3.52 Imp gal, 4.23 US gal)		
Reserve Amount	4.0 L (0.88 Imp gal, 1.06 US gal)		
Carburetor:			
Type/Quantity	TM28SS/2 pcs.		
Manufacturer	MIKUNI		
Spark Plug:			
Type/Quantity	BR9ES/2 pcs.		
Manufacturer	NGK		
Plug Gap	0.7 ~ 0.8 mm (0.028 ~ 0.032 in)		
Clutch:			
Type	Wet, multiple disc		
Transmission:			
Type	Constant mesh 6-speed		
Primary Reduction System	Helical gear		
Primary Reduction Ratio	56/22 (2.545)		
Secondary Reduction System	Chain drive		
Secondary Reduction Ratio	41/14 (2.929)		
Operation	Left foot operation		
Gear Ratio			
1st	32/13 (2.462)		
2nd	28/16 (1.750)		
3rd	25/19 (1.316)		
4th	26/24 (1.083)		
5th	25/26 (0.962)		
6th	23/27 (0.852)		
Chassis:			
Frame Type	Semi double cradle		
Caster Angle	26°		
Trail	96 mm (3.78 in)		
Tire:			
Type	Tubeless		
Size			
Front	100/80 -- 17 52H		
Rear	120/80 — 17 61H		
Tire Pressure (Cold tire):		Front	Rear
Up to 90 kg (198 lb) load*		180 kPa (1.8 kg/cm², 26 psi)	200 kPa (2.0 kg/cm², 28 psi)
90 kg (198 lb) – Maximum (196 kg (432 lb)) load*		200 kPa (2.0 kg/cm², 28 psi)	230 kPa (2.3 kg/cm², 32 psi)
High speed riding		200 kPa (2.0 kg/cm², 28 psi)	230 kPa (2.3 kg/cm², 32 psi)

*Load is total weight of cargo, rider, passenger, and accessories.

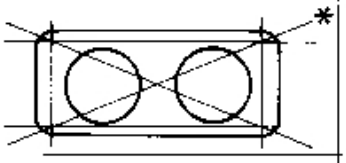
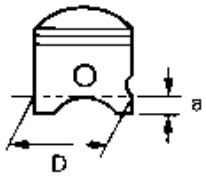
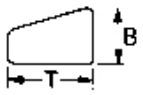
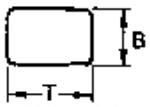
GENERAL SPECIFICATIONS

SPEC

Model	TZR250
Brake:	
Front Brake Type	Single disc brake
Front Brake Operation	Right hand operation
Rear Brake Type	Single disc brake
Rear Brake Operation	Right foot operation
Suspension:	
Front Suspension Type	Telescopic fork
Rear Suspension Type	Swingarm (Link suspension)
Shock Absorber:	
Front Shock Absorber	Coil spring/Oil damper
Rear Shock Absorber	Coil and gas spring/Oil damper
Wheel Travel:	
Front Wheel Travel	140 mm (5.51 in)
Rear Wheel Travel	100 mm (3.94 in)
Electrical:	
Ignition System	C.D.I.
Generator System	A.C. magneto generator
Battery:	
Type	GM4A-3B
Capacity	12V4AH
Headlight:	
Type	Quartz bulb (Halogen)
Bulb Wattage (Quantity):	
Headlight	12V 60W/55W (1 pc.)
Tail/Brake Light	12V 5W/21W (2 pcs.)
Flasher Light	12V 21W (4 pcs.)
Meter Light	12V 3.4W (4 pcs.)
"NEUTRAL" Indicator Light	12V 3.4W (1 pc.)
"HIGH BEAM" Indicator Light	12V 3.4W (1 pc.)
"OIL" Indicator Light	12V 3.4W (1 pc.)
"TURN" Indicator Light	12V 3.4W (1 pc.)
Auxiliary Light	12V 4W (1 pc.) (Except for England)
	12V 3.4W (1 pc.) (For England)

MAINTENANCE SPECIFICATIONS

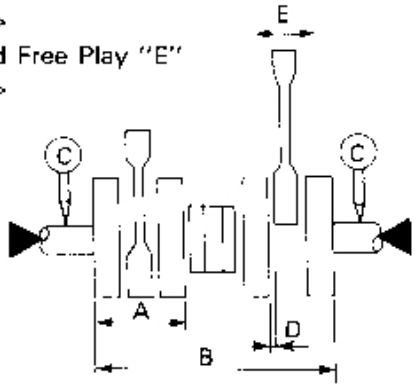
ENGINE

Model		TZR250
Cylinder Head:		
Warpage Limit		0.03 mm (0.0012 in) *Lines indicate straightedge measurement.
Cylinder:		
Bore Size		56.40 ~ 56.42 mm (2.220 ~ 2.221 in)
Taper Limit		0.05 mm (0.002 in)
Out of Round Limit		0.05 mm (0.002 in)
Piston:		
Piston Size "D"		56.39 ~ 56.40 mm (2.220 in)
Measuring Point "a"		15 mm (0.59 in)
Pistion Off-Set		Zero mm (Zero in)
Piston-to-Cylinder Clearance		0.050 ~ 0.055 mm (0.0019 ~ 0.0021 in)
< Limit >		< 0.1 mm (0.004 in) >
Over Size 1st		56.65 mm (2.23 in)
Over Size 2nd		56.90 mm (2.24 in)
Piston Ring:		
Sectional Sketch	Top Ring	Keystone type B = 1.2 mm (0.047 in) T – 2.2 mm (0.087 in)
		
	2nd Ring	Plain type B – 1.2 mm (0.047 in) T = 1.85 mm (0.073 in)
		
End Gap (Installed)	Top Ring	0.30 ~ 0.45 mm (0.012 ~ 0.018 in)
	2nd Ring	0.30 ~ 0.45 mm (0.012 ~ 0.018 in)
Side Clearance	Top Ring	0.020 ~ 0.060 mm (0.0008 ~ 0.0024 in)
	2nd Ring	0.030 ~ 0.065 mm (0.0012 ~ 0.0026 in)

MAINTENANCE SPECIFICATIONS

SPEC

Model	TZR250
Crankshaft:	
Crank Width "A"	55.95 ~ 56.00 mm (2.203 ~ 2.205 in)
Assembly Width "B"	167.90 ~ 168.05 mm (6.610 ~ 6.616 in)
Runout Limit "C"	0.03 mm (0.0012 in)
Big End Side Clearance "D"	0.25 ~ 0.75 mm (0.010 ~ 0.030 in)
<Limit>	<1.0 mm (0.039 in)>
Small End Free Play "E"	0.4 ~ 0.6 mm (0.016 ~ 0.024 in)
<Limit>	<1.0 mm (0.039 in)>
Clutch:	
Friction Plate	
Thickness	2.9 ~ 3.1 mm (0.114 ~ 0.122 in)
Quantity	7 pcs.
Wear Limit	2.8 mm (0.110 in)
Clutch Plate	
Thickness	1.5 ~ 1.7 mm (0.059 ~ 0.067 in)
Quantity	6 pcs.
Warpage Limit	0.1 mm (0.004 in)
Clutch Spring	
Free Length	34.9 mm (1.374 in)
Quantity	4 pcs.
Minimum Free Length	32.9 mm (1.295 in)
Clutch Release Method	Outer pull (Rack and pinion pull)
Transmission:	
Main Axle Runout Limit	0.08 mm (0.003 in)
Drive Axle Runout Limit	0.08 mm (0.003 in)
Shifter:	
Type	Cam drum and guide bar
Guide Bar Bending Limit	0.03 mm (0.0012 in)
Kick Starter:	
Type	Ratchet type
Air Filter:	
Oil Grade	Air-cooled 2 stroke engine oil or Yamaha oil 2T



MAINTENANCE SPECIFICATIONS

SPEC

Model		TZR250
Carburetor:		
I.D. Mark		2MA 00
Main Jet	(M.J.)	#230
Air Jet	(A.J.)	φ1.5
Jet Needle-Position	(J.N.)	5L19—2/5
Needle Jet	(N.J.)	Q—2 (#505)
Cutaway	(C.A.)	2.5
Pilot Air Jet	(P.A.J.)	φ1.4
Pilot Outlet	(P.O.)	φ0.6
Pilot Jet	(P.J.)	#20
Bypass 1	(B.P.1)	φ1.6
Valve Seat Size	(V.S.)	φ2.8
Starter Jet	(G.S.)	#35
Power Jet	(PW.J.)	#60
Fuel Level	(F.L.)	1.1 ~ 2.1 mm (0.04 ~ 0.08 in)
Float Height	(F.H.)	15 ~ 17 mm (0.59 ~ 0.67 in)
Idling Speed		1,150 ~ 1,250 r/min
Reed Valve:		
Valve Thickness		0.4 mm (0.016 in)
Valve Stopper Height		9.4 mm (0.370 in)
Valve Bending Limit		1.5 mm (0.07 in)
Lubrication System:		
Autolube Pump		
Color Code		Sky blue
Minimum Stroke		0.15 ~ 0.20 mm (0.006 ~ 0.008 in)
Maximum Stroke		2.05 ~ 2.27 mm (0.080 ~ 0.089 in)
Minimum Output		0.75 ~ 1.00 cm^3 per 200 strokes
Maximum Output		10.3 ~ 11.4 cm^3 per 200 strokes
Pulley Adjusting Mark		At full throttle
Oil Pump		
Type		Trochoid type
Tip Clearance		0.10 ~ 0.15 mm (0.004 ~ 0.006 in)
<Limit>		<0.17 mm (0.007 in)>
Side Clearance		0.04 ~ 0.09 mm (0.002 ~ 0.004 in)
<Limit>		<0.12 mm (0.005 in)>
Cooling System:		
Radiator Core Width		290.6 mm (11.44 in)
Radiator Core Height		180.0 mm (7.09 in)
Radiator Core Thickness		16.0 mm (0.63 in)
Radiator Cap Opening Pressure		75 ~ 105 kPa (0.75 ~ 1.05 kg/cm^2, 10 ~ 14 psi)
Reservoir Tank Capacity		0.25 L (0.22 Imp qt, 0.26 US qt)
Water Pump Type		Single-suction centrifugal pump
Thermostatic valve:		
Opening Temperature		63 ~ 67°C (146 ~ 153°F)
Full Open Temperature/Lift		80°C (176°F)/7 mm (0.28 in) or more

MAINTENANCE SPECIFICATIONS

SPEC

Tightening Torque:

Part to be tightened	Q'ty	Thread size	Tightening torque			Remarks
			Nm	m•kg	ft•lb	
Cylinder head						
Cap nut	4	M8 ×1.25	22	2.2	16	
Flange nut	6	M8 ×1.25	22	2.2	16	
Spark plug	2	M14×1.25	20	2.0	14	
Cylinder						
Stud bolt	4	M8 ×1.25	13	1.3	9.4	
Stud bolt	6	M8 ×1.25	13	1.3	9.4	
Flange nut	8	M8 ×1.25	28	2.8	20	
Crankcase						
Stud bolt	4	M8 ×1.25	13	1.3	9.4	
Stud bolt	4	M8 ×1.25	13	1.3	9.4	
Flange bolt	7	M8 ×1.25	24	2.4	17	L: 90 mm (3.5 in)
Flange bolt	1	M8 ×1.25	24	2.4	17	L: 105 mm (4.1 in)
Flange bolt	7	M6 ×1.0	10	1.0	7.2	L: 55 mm (2.2 in)
Flange bolt	1	M6 ×1.0	10	1.0	7.2	L: 40 mm (1.6 in)
Pulley cover (Power valve)						
Hexagon socket head bolt	2	M5 ×0.8	7	0.7	5.1	
Pulley housing (Power valve)						
Hexagon socket head bolt	2	M5 ×0.8	7	0.7	5.1	
Power valve						
Hexagon socket head bolt	2	M5 ×0.8	7	0.7	5.1	M
Power valve pulley						
Hexagon bolt with spring washer and plain washer	1	M6 ×1.0	10	1.0	7.2	
Thrust plate (Power valve)						
Hexagon socket head bolt	2	M5 ×0.8	7	0.7	5.1	
Power valve holder						
Hexagon socket head bolt	1	M5 ×0.8	7	0.7	5.1	
Power valve joint						
Hexagon socket head bolt	2	M5 ×0.8	7	0.7	5.1	
Power valve cable adjuster						
Hexagon nut	2	M6 ×1.0	8	0.8	5.8	
Water pump housing cover						
Hexagon socket head bolt	2	M6 ×1.0	10	1.0	7.2	L: 25 mm (1.0 in)
Hexagon socket head bolt	2	M6 ×1.0	10	1.0	7.2	L: 65 mm (2.5 in)
Drain bolt	1	M8 ×1.25	16	1.6	11	
Thermostatic valve cover						
Hexagon socket head bolt	3	M6 ×1.0	10	1.0	7.2	
Radiator						
Flange bolt	2	M6 ×1.0	6	0.6	4.3	
Radiator cover						
Panhead screw with spring washer and plain washer	4	M6 ×1.0	6	0.6	4.3	
Autolube pump						
Panhead screw	2	M5 ×0.8	5	0.5	3.6	G

MAINTENANCE SPECIFICATIONS

SPEC

Part to be tightened	Q'ty	Thread size	Tightening torque			Remarks
			Nm	m•kg	ft•lb	
Oil pump						
Panhead screw	3	M5 ×0.8	5	0.5	3.6	ST
Delivery pipe (Oil pump)						
Panhead screw	1	M5 ×0.8	5	0.5	3.6	ST
Strainer cover						
Panhead screw	2	M5 ×0.8	5	0.5	3.6	ST
Intake manifold						
Hexagon socket head bolt	8	M6 ×1.0	10	1.0	7.2	
Starter lever						
Panhead screw with spring washer	2	M4 ×0.7	2	0.2	1.4	
Muffler						
Flange nut	4	M8 ×1.25	18	1.8	13	
A.C. Generator cover						
Hexagon socket head bolt	4	M6 ×1.0	5	0.5	3.6	
Crankcase cover (Left)						
Hexagon socket head bolt	3	M6 ×1.0	5	0.5	3.6	
Crankcase cover (Right)						
Hexagon socket head bolt	7	M6 ×1.0	10	1.0	7.2	
Flange bolt	1	M10×1.0	22	2.2	16	
Drain bolt	1	M8 ×1.25	16	1.6	11	
Autolube pump cover						
Hexagon socket head bolt	2	M6 ×1.0	6	0.6	4.3	
Clutch cable holder						
Hexagon socket head bolt	1	M6 ×1.0	10	1.0	7.2	
Kick crank						
Hexagon bolt	1	M8 ×1.25	25	2.5	18	
Primary drive gear						
Hexagon nut	1	M16×1.0	65	6.5	47	
Clutch boss						
Hexagon nut	1	M20×1.0	90	9.0	65	
Pressure plate						
Hexagon screw with plain washer	4	M5 ×0.8	7	0.7	5.1	
Pull lever holder						
Panhead screw	1	M6 ×1.0	10	1.0	7.2	ST
Bearing holder (Main axle)						
Hexagon socket head bolt	2	M6 ×1.0	10	1.0	7.2	ST
Drive sprocket						
Hexagon nut	1	M20×1.0	90	9.0	65	
Stopper plate (Shift cam)						
Flat head screw	2	M6 ×1.0	8	0.8	5.8	ST
Stopper lever						
Bolt	1	M6 ×1.0	10	1.0	7.2	ST
Shift lever adjuster						
Hexagon nut	1	M8 ×1.25	30	3.0	22	ST

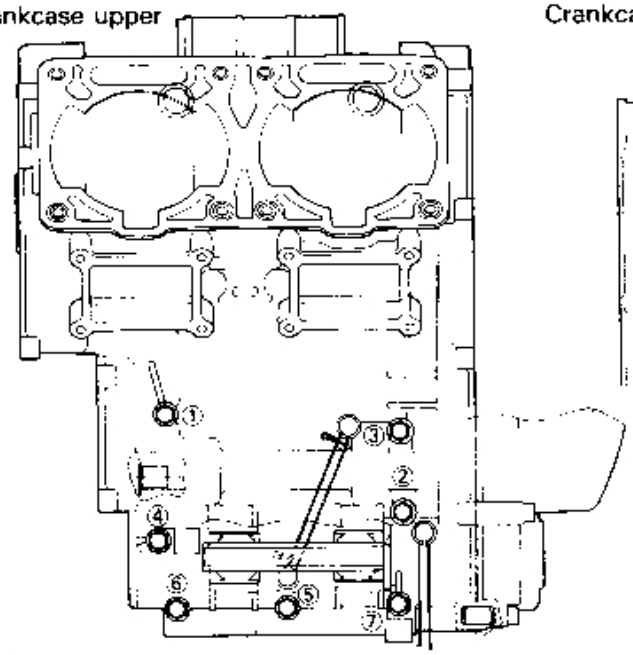
MAINTENANCE SPECIFICATIONS

SPEC

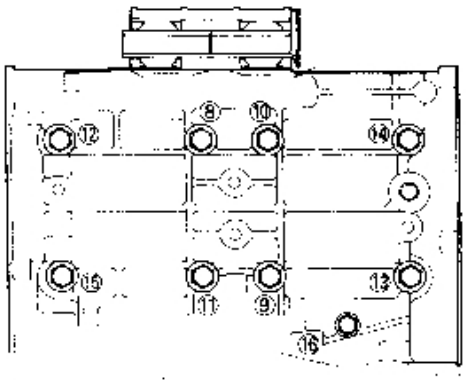
Part to be tightened	Q'ty	Thread size	Tightening torque			Remarks
			Nm	m•kg	ft•lb	
Change pedal						
Hexagon socket head bolt	1	M6 ×1.0	10	1.0	7.2	
Shift rod						
Hexagon nut	2	M8 ×1.25	10	1.0	7.2	
Stator coil						
Panhead screw with spring washer	3	M6 ×1.0	7	0.7	5.1	
Pickup coil						
Panhead screw with spring washer and plain washer	2	M5 ×0.8	5	0.5	3.6	
CDI magneto						
Hexagon nut	1	M12×1.25	80	8.0	58	
Neutral switch	1	M10×1.25	3	0.3	2.2	
Thermo unit	1	PT 1/8	15	1.5	11	

Tightening sequence:

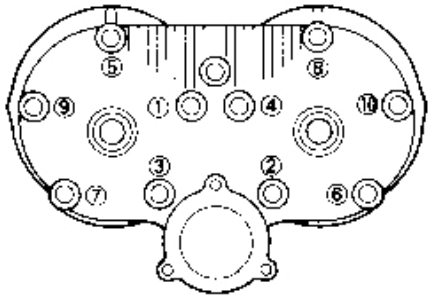
Crankcase upper



Crankcase lower



Cylinder head



MAINTENANCE SPECIFICATIONS

SPEC 9

CHASSIS

Model	TZR250
Steering System:	
Bearing Type	Ball Bearing
Bearing Size (Quantity)	
Upper	1/4 in (19 pcs.)
Lower	1/4 in (19 pcs.)
Front Suspension:	
Front Fork Travel	140 mm (5.51 in)
Fork Spring Free Length	427.2 mm (16.82 in)
<Limit>	<420.0 mm (16.53 in)>
Collar Length	90.0 mm (3.54 in)
Spring Rate (K_1)	8 N/mm (0.8 kg/mm, 68.8 lb/in)
Stroke (K_1)	0.0 ~ 140.0 mm (0.0 ~ 5.51 in)
Optional Spring	No.
Oil Capacity	444 cm^3 (15.63 Imp oz, 15.01 US oz)
Oil Level	90 mm (3.54 in) From top of inner tube fully compressed without spring.
Oil Grade	Fork oil 10W or equivalent
Rear Suspension:	
Shock Absorber Travel	40 mm (1.57 in)
Spring Free Length	182 mm (7.17 in)
Fitting Length	168 mm (6.61 in)
Spring Rate (K_1)	105 N/mm (10.5 kg/mm, 578.3 lb/in)
Stroke (K_1)	0.0 ~ 40.0 mm (0.0 ~ 1.57 in)
Optional Spring	No.
Enclosed Gas Pressure	1,200 kPa (12.0 kg/cm^2, 170.6 psi)
<Minimum ~ Maximum>	<1,100 ~ 1,300 kPa (11.0 ~ 13.0 kg/cm^2, 156.4 ~ 184.8 psi)>
Swingarm:	
Free Play Limit (Swingarm end)	1.0 mm (0.039 in) Move swingarm end side to side
Front Wheel:	
Type	Cast wheel
Rim Size	MT2.15 × 17
Rim Material	Aluminum
Rim Runout Limit	
Vertical	2.0 mm (0.079 in)
Lateral	2.0 mm (0.079 in)

MAINTENANCE SPECIFICATIONS

SPEC

Model	TZR250
Rear Wheel:	
Type	Cast wheel
Rim Size	MT2.50×17
Rim Material	Aluminum
Rim Runout Limit	
Vertical	2.0 mm (0.079 in)
Lateral	2.0 mm (0.079 in)
Drive Chain:	
Type/Manufacturer	520 V4/DAIDO
Number of Links	110 Links
Chain Free Play	30~40 mm (1.18~1.57 in)
Front Disc Brake:	
Type	Single
Disc Outside Diameter	320 mm (12.6 in)
Disc Thickness	5.0 mm (0.20 in)
Pad Thickness	7.5 mm (0.29 in)
<Wear Limit>	<0.5 mm (0.02 in)>
Master Cylinder Inside Diameter	14.0 mm (0.55 in)
Caliper Cylinder Inside Diameter	33.96 mm (1.34 in)
Brake Fluid Type	DOT No.3
Rear Disc Brake:	
Type	Single
Disc Outside Diameter	210 mm (8.27 in)
Disc Thickness	5.0 mm (0.20 in)
Pad Thickness	5.5 mm (0.22 in)
<Wear Limit>	<0.5 mm (0.02 in)>
Master Cylinder Inside Diameter	12.7 mm (0.50 in)
Caliper Cylinder Inside Diameter	38.1 mm (1.50 in)
Brake Fluid Type	DOT No.3
Brake Lever and Brake Pedal:	
Brake Lever Free Play	2~5 mm (0.08~0.20 in) At end of brake lever
Brake Pedal Position	55 mm (2.16 in) Below top of footrest
Clutch Lever and Throttle Grip:	
Clutch Lever Free Play	10~15 mm (0.39~0.59 in) At end of clutch lever
Throttle Cable Free Play	2~5 mm (0.08~0.20 in) At grip flange

MAINTENANCE SPECIFICATIONS

SPEC

Tightening Torque:

Part to be tightened	Thread size	Tightening torque			Remarks
		Nm	m•kg	ft•lb	
Engine mount					
Front	M10×1.25	55	5.5	40	
Rear	M10×1.25	55	5.5	40	
Engine bracket and crankcase (Lower)	M10×1.25	55	5.5	40	
Engine bracket and torque rod	M10×1.25	45	4.5	32	
Torque rod and torque rod stay	M10×1.25	45	4.5	32	
Down tube and frame					
Upper	M8 ×1.25	25	2.5	18	
Lower	M10×1.25	45	4.5	32	
Pivot shaft and nut	M14×1.5	90	9.0	65	
Swing arm and connecting arm	M10×1.25	37	3.7	27	
Connecting arm and relay arm	M12×1.25	40	4.0	29	
Relay arm and frame	M10×1.25	37	3.7	27	
Rear shock absorber and frame	M10×1.25	40	4.0	29	
Steering shaft and nut	M22×1.0	110	11.0	80	
Handle crown and inner tube	M8 ×1.25	32	3.2	23	
Under bracket and inner tube	M10×1.25	35	3.5	25	
Cap bolt (Front fork)	M35×1.0	23	2.3	17	
Inner tube and damper rod	M10×1.25	20	2.0	14	♦
Brake disc and wheel hub	M8 ×1.25	20	2.0	14	♦
Brake caliper and front fork	M10×1.25	35	3.5	25	
Brake hose and brake caliper	M10×1.25	26	2.6	19	
Front wheel axle	M12×1.25	74	7.4	53	
Rear wheel axle and nut	M14×1.5	105	10.5	75	
Driven sprocket and wheel hub	M8 ×1.25	32	3.2	23	
Caliper bracket and swingarm	M10×1.25	45	4.5	32	
Brake caliper and caliper bracket	M10×1.25	35	3.5	25	
Handlebar and inner tube	M6 ×1.0	13	1.3	9.4	
Frame and footrest bracket	M8 ×1.25	32	3.2	23	
Footrest (For rider) and footrest bracket	M10×1.25	55	5.5	40	
Sidestand bracket and frame	M10×1.25	55	5.5	40	
Ring nut (Steering shaft)	M25×1.0	20	2.0	14	Refer to "NOTE".

NOTE:

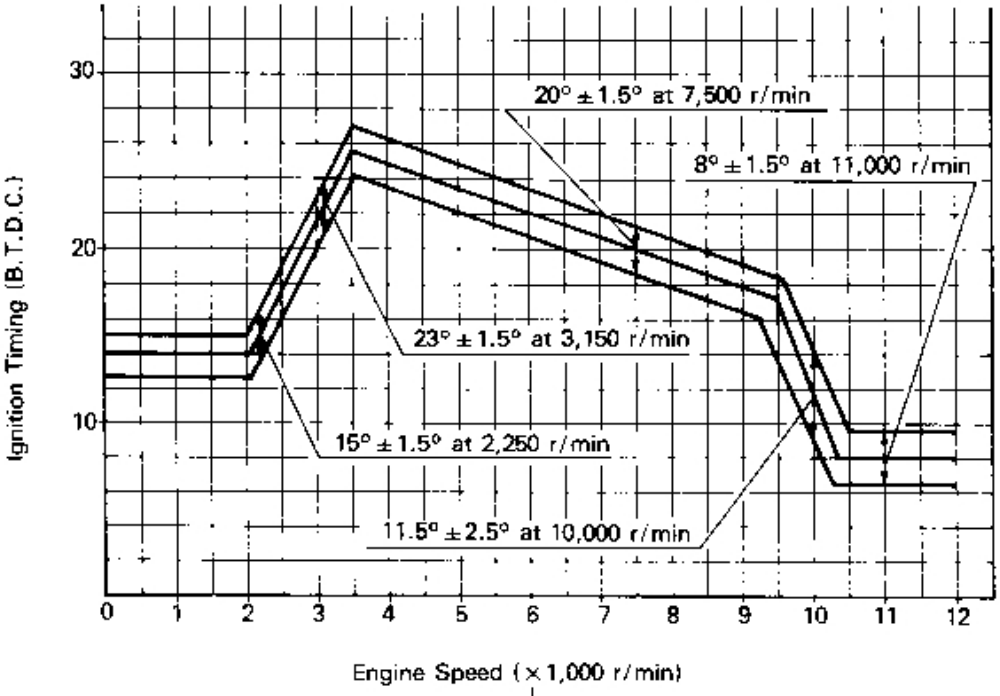
1. First, tighten the ring nut approximately 40 Nm (4.0 m•kg, 29 ft•lb) by using the torque wrench, then loosen the ring nut one turn.
2. Retighten the ring nut to specification.

MAINTENANCE SPECIFICATIONS

SPEC

ELECTRICAL

Model	TZR250
Voltage:	12V
Ignition System:	
Ignition Timing (B.T.D.C.)	14° at 1,200 r/min
Advancer Type	Electrical type

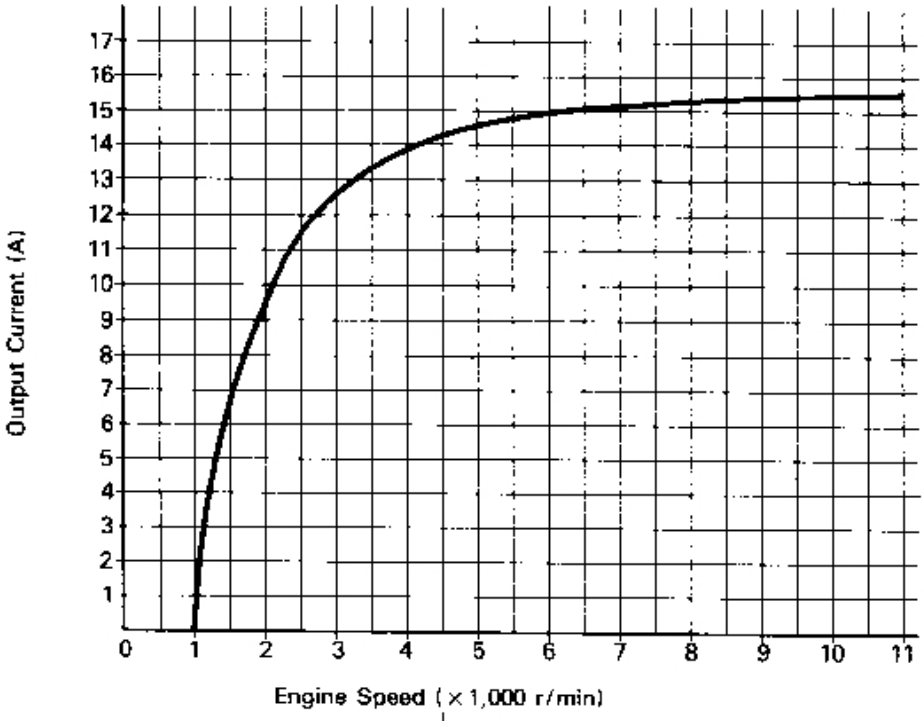


C.D.I.:	
Magneto Model/Manufacturer	TVCE38/NIPPON DENSO
C.D.I. Unit Model/Manufacturer	QAB73/NIPPON DENSO
Pickup Coil Resistance (Color)	94 ~ 140Ω at 20°C (68°F) (White/Green - White/Red)
Source Coil (1) Resistance (Color)	128 ~ 193Ω at 20°C (68°F) (Green — Brown)
Source Coil (2) Resistance (Color)	3.6 ~ 5.4Ω at 20°C (68°F) (Brown - Red)
Ignition Coil:	
Model/Manufacturer	JO136/NIPPON DENSO
Minimum Spark Gap	6 mm (0.24 in)
Primary Coil Resistance	0.26 ~ 0.40Ω at 20°C (68°F)
Secondary Coil Resistance	4.7 ~ 7.0kΩ at 20°C (68°F)
Spark Plug Cap:	
Type	Resin Type
Plug Cap Resistance	10kΩ at 20°C (68°F)

MAINTENANCE SPECIFICATIONS

SPEC

Model	TZR250
Charging System:	A.C. Magneto Generator
A.C. Magneto Generator:	
Model/Manufacturer	VCE38/NIPPON DENSO
Stator Coil Resistance (Color)	0.44 – 0.66Ω at 20°C (68°F) (White—White)
Standard Output	14.3 – 15.3V at 3,000 r/min



Voltage Regulator:	
Model/Manufacturer	SH569/SHINDENGEN
Rectifier:	
Model/Manufacturer	SH569/SHINDENGEN
Capacity	25A
Withstand Voltage	200V
Battery:	
Specific Gravity	1.280
Horn:	
Type	Plane Type
Quantity	1 pc.
Model/Manufacturer	YF3—12/NIKKO
Maximum Amperage	2.5A

MAINTENANCE SPECIFICATIONS

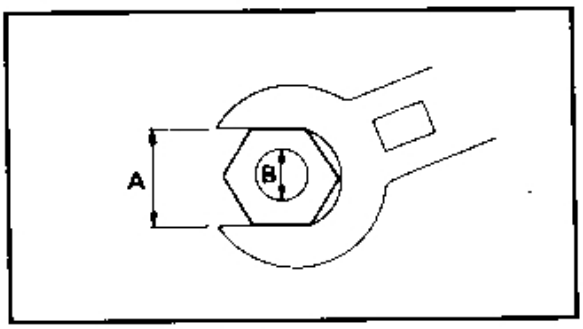
SPEC

Model	TZR250
Flasher Relay:	
Type	Condenser Type
Model/Manufacturer	FU257CD/NIPPON DENSO
Self Cancelling Device	Yes
Flasher Frequency	75 ~ 95 cycles/min
Wattage	27W × 2 + 3.4W
Flasher Cancelling Unit (Except for Germany):	
Model/Manufacturer	1AO/MATSUSHITA
Ignition Control Unit:	
Model/Manufacturer	4Y3/YAMAHA
Oil Level Switch:	
Model/Manufacturer	1KT/TAIHEIYO ASTI
Thermo Unit:	
Model/Manufacturer	11H/NIPPON SEIKI
Y.P.V.S. Control Unit:	
Model/Manufacturer	1KT/YAMAHA
Y.P.V.S. Servo Motor:	
Model/Manufacturer	1KT/YAMAHA
Curcuit Breaker:	
Type	Fuse
Curcuit (Fuse):	
"MAIN"	20A (1 pc.)
"HEADLIGHT"	15A (1 pc.)
"SIGNAL"	15A (1 pc.)
"YPVS"	5A (1 pc.)

GENERAL TORQUE SPECIFICATIONS

This chart specifies torque for standard fasteners with standard I.S.O. pitch threads. Torque specifications for special components or assemblies are included in the applicable sections of this book. To avoid warpage, tighten multi-fastener assemblies in a crisscross fashion, in progressive stages, until full torque is reached. Unless otherwise specified, torque specifications call for clean, dry threads. Components should be at room temperature.

A (Nut)	B (Bolt)	General torque specifications		
		Nm	m·kg	ft·lb
10 mm	6 mm	6	0.6	4.3
12 mm	8 mm	15	1.5	11
14 mm	10 mm	30	3.0	22
17 mm	12 mm	55	5.5	40
19 mm	14 mm	85	8.5	61
22 mm	16 mm	130	13.0	94



A: Distance across flats
B: Outside thread diameter

DEFINITION OF UNITS

Unit	Read	Definition	Measure
mm	millimeter	10^{-3} meter	Length
cm	centimeter	10^{-2} meter	Length
kg	kilogram	10^{3} gram	Weight
N	Newton	1 kg × m/sec^2	Force
Nm	Newton meter	N × m	Torque
m·kg	Meter kilogram	m × kg	Torque
Pa	Pascal	N/m^2	Pressure
N/mm	Newton per millimeter	N/mm	Spring rate
L	Liter	—	Volume or capacity
cm^3	Cubic centimeter		
r/min	Rotation per minute	—	Engine speed

LUBRICATION POINTS AND LUBRICANT TYPE

ENGINE

Lubrication Points (Part name)	Lubricant Type
Oil seal lips (All)	
O-rings (All)	
Bearing retainer	
Crankshaft bearings (Left and center)	
Needle bearings (Connecting rod)	
Main axle bearings	
Drive axle bearings	
Shift cam bearings	
Pull rod bearing	
Crank pins	
Piston rings, piston pins and pistons	
Power valve holders	
Impeller shaft (Water pump)	
Warm shaft (Autolube pump)	
Pump shaft (Oil pump)	
Kick idle gear	
Kick axle	
Primary driven gear (Clutch housing)	
Pull rod	
Pull lever axle	
Sliding gear (Transmission)	
Free movement gear (Transmission)	
Collar (Drive axle)	
Guide bar (Shift forks)	
Link ball (Change pedal)	
Pivoting points (Change pedal)	
Crankcase mating surfaces	Yamaha Bond No. 4

LUBRICATION POINTS AND LUBRICANT TYPE

SPEC 9

CHASSIS

Lubrication Points (Part name)	Lubricant Type
Ball bearings (Steering shaft)	
Oil seal lips (Front wheel and rear wheel)	
Pivoting point (Brake pedal)	
Pivoting point (Sidestand)	
Right handlebar end	
Throttle cable end (Throttle grip)	
Pivoting point (Clutch lever)	
Clutch cable end (Clutch lever)	
Pivoting point (Brake lever)	
Bushes (Rear shock absorber)	
Oil seal lips (Rear shock absorber)	
Pivot shaft (Swingarm)	
Oil seal lips (Swingarm)	
Bearing (Swingarm)	
Bushes (Relay arm)	
Collars (Relay arm)	
Oil seal lips (Connecting arm)	
Bearing (Connecting arm)	
Collars (Connecting arm)	
Front wheel axle	
Rear wheel axle	
Collar (Front wheel)	
Speedometer gear unit	

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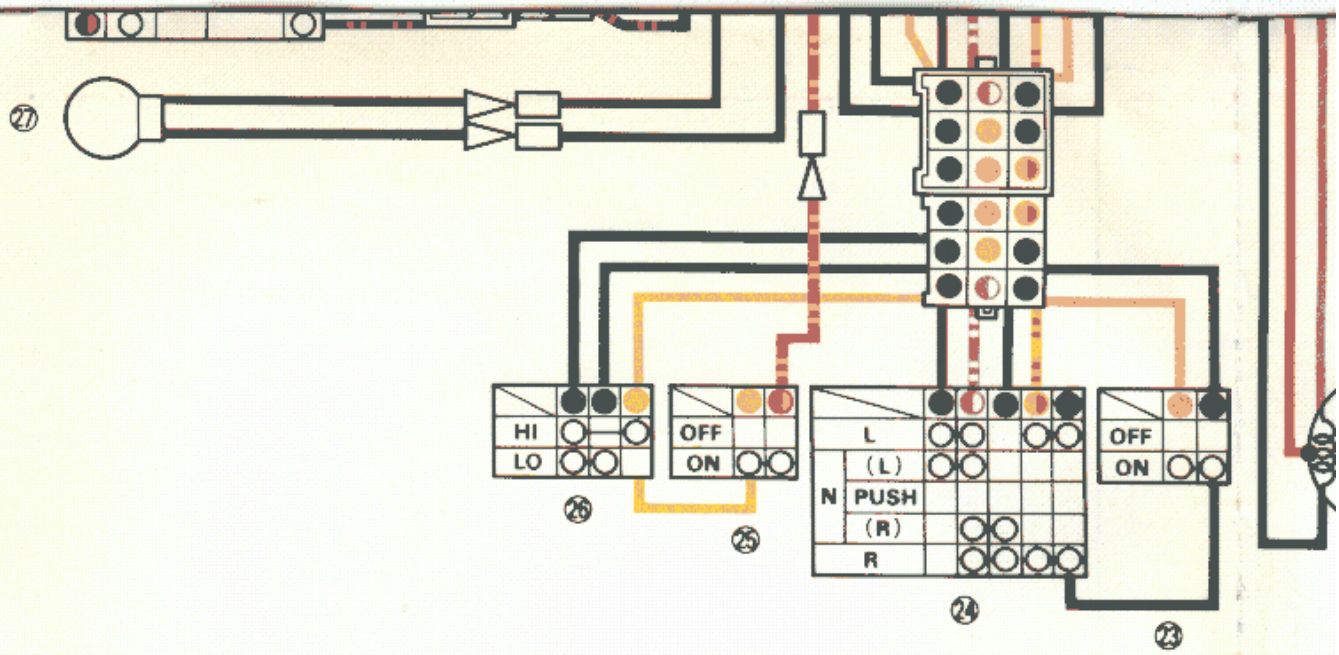
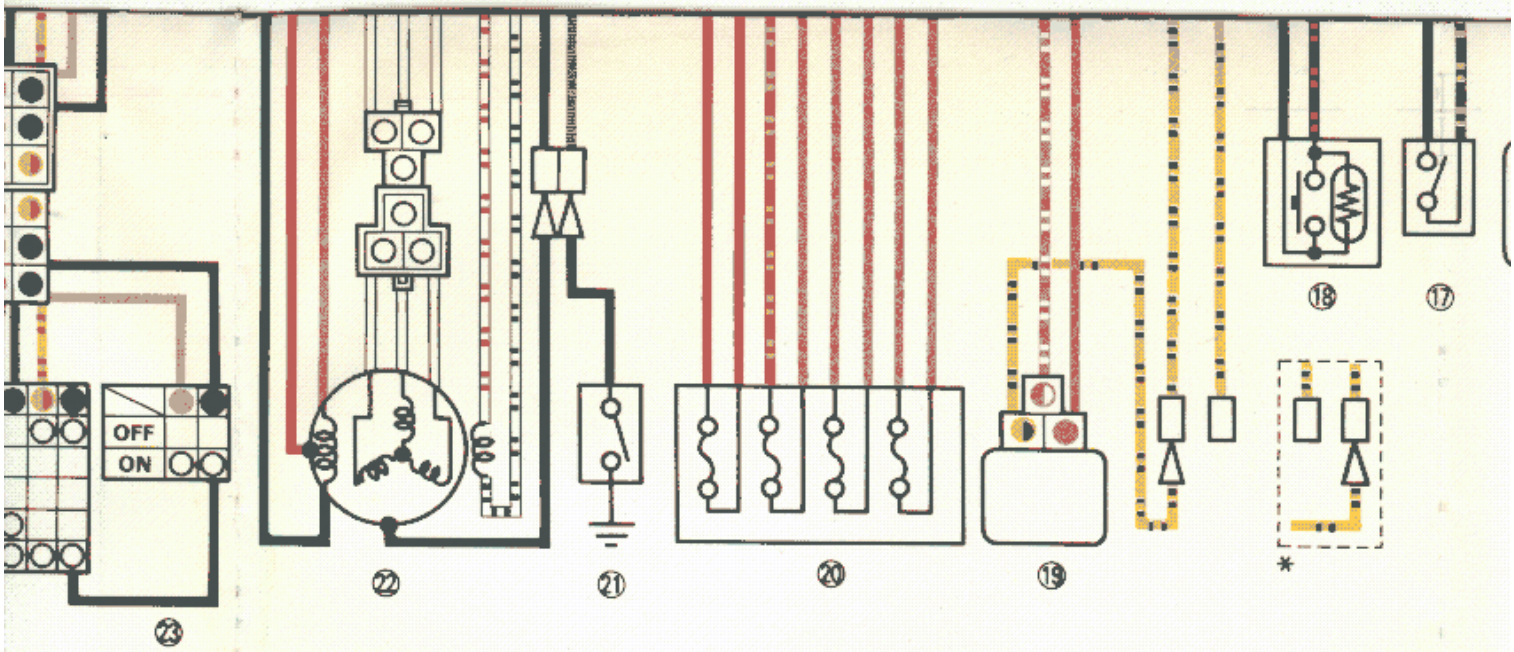
TZR250 WIRING DIAGRAM



1. "LIGHTS" switch
2. "ENGINE STOP" switch
3. Front brake switch
4. Flasher cancelling unit (Except for Germany)
5. Servomotor
6. C.D.I. unit
7. Ignition coil
8. Spark plug
9. Rear brake switch
10. Rectifier/Regulator
11. Ignition control unit
12. Battery
13. Rear flasher light (R)
14. Tail/Brake light
15. Rear flasher light (L)
16. Y.P.V.S. control unit
17. Sidestand switch
18. Oil level gauge
19. Flasher relay
20. Fuse box
21. Neutral switch
22. C.D.I. magneto
23. "HORN" switch
24. "TURN" switch
25. "PASS" switch
26. "LIGHTS" (Dimmer) switch
27. Front flasher light (L)
28. Main switch
29. Headlight
30. Auxiliary light
31. "TURN" indicator light
32. "HIGH BEAM" indicator light
33. "OIL" indicator light
34. "NEUTRAL" indicator light
35. Tachometer
36. Temperature gauge
37. Reed switch
38. Meter light
39. Front flasher light (R)
40. Horn
41. Thermo switch

*For Germany

1. Contacteur d'éclaira
2. Interrupteur de sécu
3. Contacteurs avant d
4. Unite d'arrêt de clig (Excepté pour l'Alle
5. Servomoteur
6. Bloc C.D.I.
7. Bobine d'allumage
8. Bougie
9. Contacteur arrière d
10. Redresseur/Régulat
11. Bloc de commande
12. Batterie
13. Clignoteur arrière (
14. Feu arrière/Stop
15. Clignoteur arrière (
16. Bloc de commande
17. Contacteur de béqu
18. Contacteur de nivea
19. Relais des clignotan
20. Bloc de fusibles
21. Contacteur de point

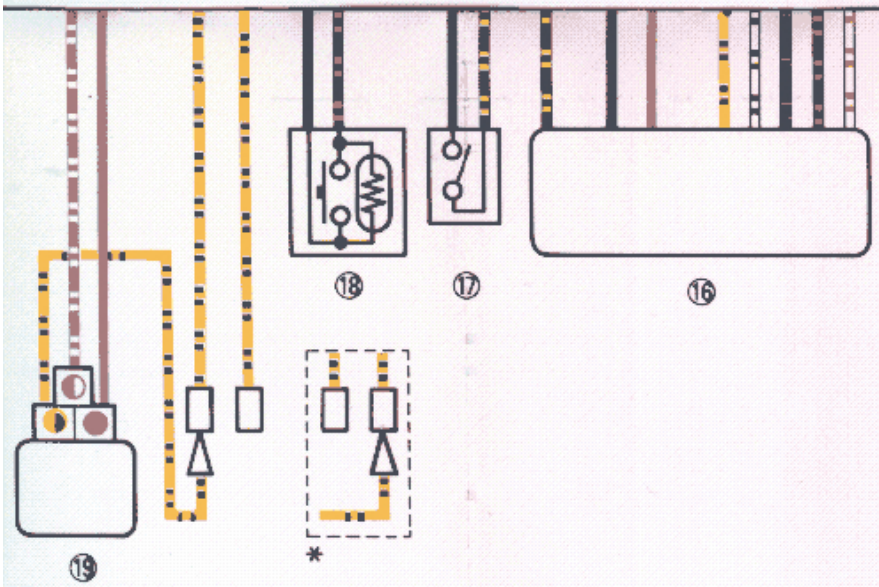


COLOR CODE	CODE DE COULEUR	FARBKODIER
Black / Noir / Schwarz	Green / Vert / Grün	Pink / Rose / Rosa
Yellow / Jaune / Gelb	Black/ / Noir/ / Schwa	
Brown / Brun / Braun	Gray / Gris / Grau	Red / Rouge / Rot
Black/Red / Noir/Rouge / Schwarz/Rot	Brown / Brun/ / Braun	
Chocolate / Chocolat / Schokoladenfarbe	Blue / Bleu / Blau	Sky blue / Bleu ciel / Himmelblau
Black/White / Noir/Blanc / Schwarz/Weiß	Green / Vert/ / Grün/	
Dark green / Vert foncé / Dunkelgrün	Orange / Orange / Orange	White / Blanc / Weiß
Black/Blue / Noir/Bleu / Schwarz/Blau	Green / Vert/ / Grün/	

1. Contacteur d'éclairage "LIGHTS"
2. Interrupteur de sécurité "ENGINE STOP"
3. Contacteurs avant du feu stop
4. Unite d'arrêt de clignoteur (Excepté pour l'Allemagne)
5. Servomoteur
6. Bloc C.D.I.
7. Bobine d'allumage
8. Bougie
9. Contacteur arrière du feu stop
10. Redresseur/Régulateur
11. Bloc de commande d'allumage
12. Batterie
13. Clignoteur arrière (D)
14. Feu arrière/Stop
15. Clignoteur arrière (G)
16. Bloc de commande du Y.P.V.S.
17. Contacteur de béquille latérale
18. Contacteur de niveau d'huile
19. Relais des clignotants
20. Bloc de fusibles
21. Contacteur de point mort
22. Magnéto C.D.I.
23. Commutateur d'avertisseur "HORN"
24. Commutateur de clignotant "TURN"
25. Commutateur de dépassement "PASS"
26. Commutateur de feu de croisement "LIGHTS" (Dimmer)
27. Clignoteur avant (G)
28. Contacteur à clé
29. Phare
30. Témoin auxiliaire
31. Témoin de clignotant "TURN"
32. Lampe-témoin de feu de route "HIGH BEAM"
33. Témoin d'huile "OIL"
34. Lampe-témoin de point mort "NEUTRAL"
35. Compte-tours
36. Indicateur de température
37. Commutateur à lame
38. Lampe de compteur
39. Clignoteur avant (D)
40. Avertisseur
41. Sonde thermique

*Pour l'Allemagne

1. Lichtschalter
2. Motorstoppsc
3. Vorderrad-Bre
4. Blinker-Absch (Ausgenomme
5. Servomotor
6. C.D.I.-Zündei
7. Zündspule
8. Zündkerze
9. Hinterrad-Brer
10. Gleichrichter/
11. Zündsteuerein
12. Batterie
13. Hinteres Blink
14. Schluß/Brems
15. Hinteres Blink
16. Y.P.V.S.-Steu
17. Seitenständer
18. Ölstandschalte
19. Blinkerrelais
20. Sicherungskas
21. Leerlaufschalt



OULEUR **FARBKODIERUNG**

ık se sa	Yellow Jaune Gelb	Black/Yellow Noir/Jaune Schwarz/Gelb	Blue/Black Bleu/Noir Blau/Schwarz	Red/Yellow Rouge/Jaune Rot/Gelb	Yellow/Black Jaune/Noir Gelb/Schwarz
d uge t	Black/Red Noir/Rouge Schwarz/Rot	Brown/White Brun/Blanc Braun/Weiß	Blue/Red Bleu/Rouge Blau/Rot	White/Black Blanc/Noir Weiß/Schwarz	Yellow/Green Jaune/Vert Gelb/Grün
y blue eu ciel mmelblau	Black/White Noir/Blanc Schwarz/Weiß	Green/Red Vert/Rouge Grün/Rot	Blue/White Bleu/Blanc Blau/Weiß	White/Green Blanc/Vert Weiß/Grün	Yellow/Blue Jaune/Bleu Gelb/Blau
hite anc eiß	Black/Blue Noir/Bleu Schwarz/Blau	Green/Yellow Vert/Jaune Grün/Gelb	Blue/Yellow Bleu/Jaune Blau/Gelb	White/Red Blanc/Rouge Weiß/Rot	Yellow/Red Jaune/Rouge Gelb/Rot

r "HORN"
nt "TURN"
ment "PASS"
roisement

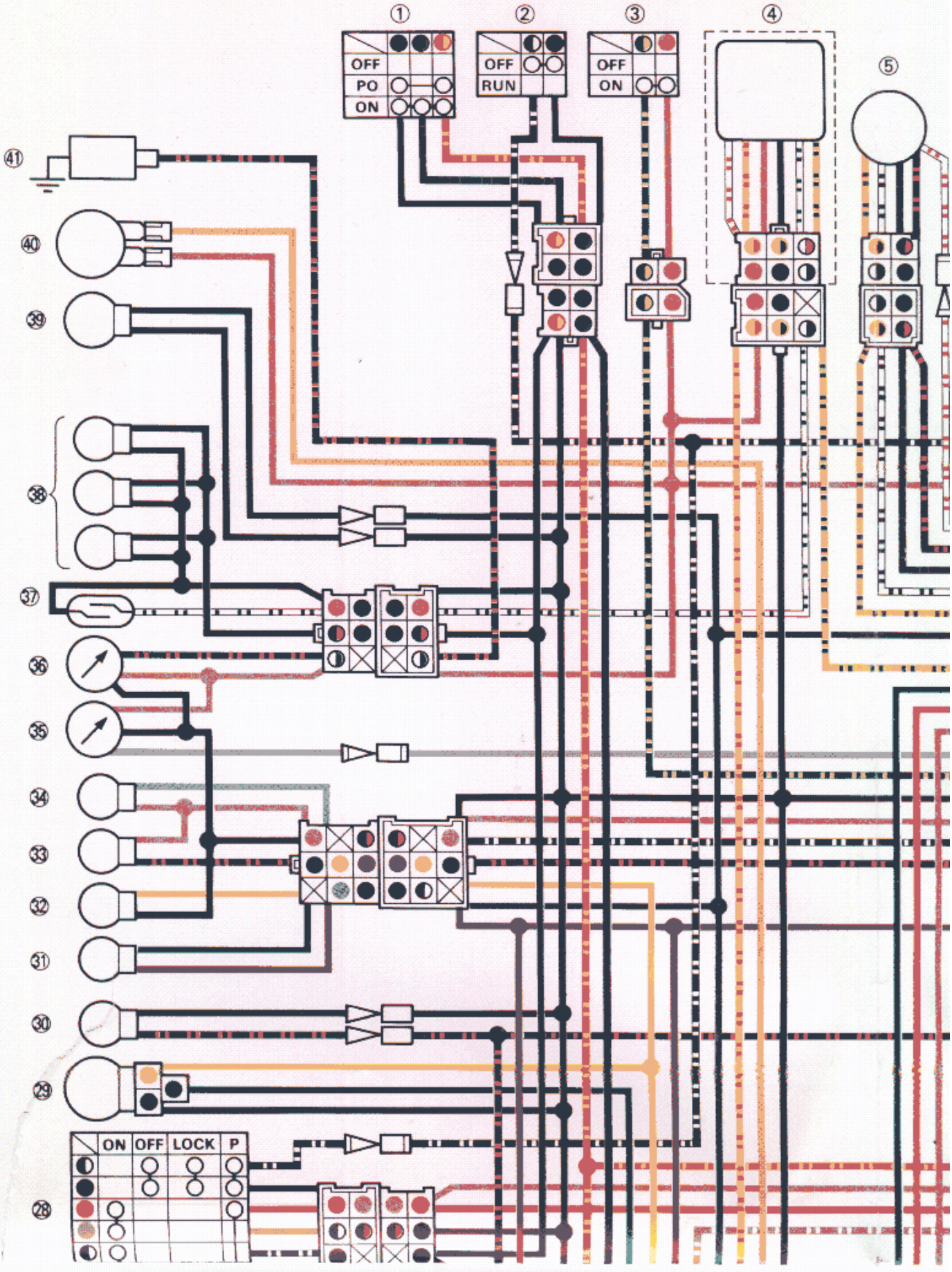
URN"
route "HIGH BEAM"

hort "NEUTRAL"

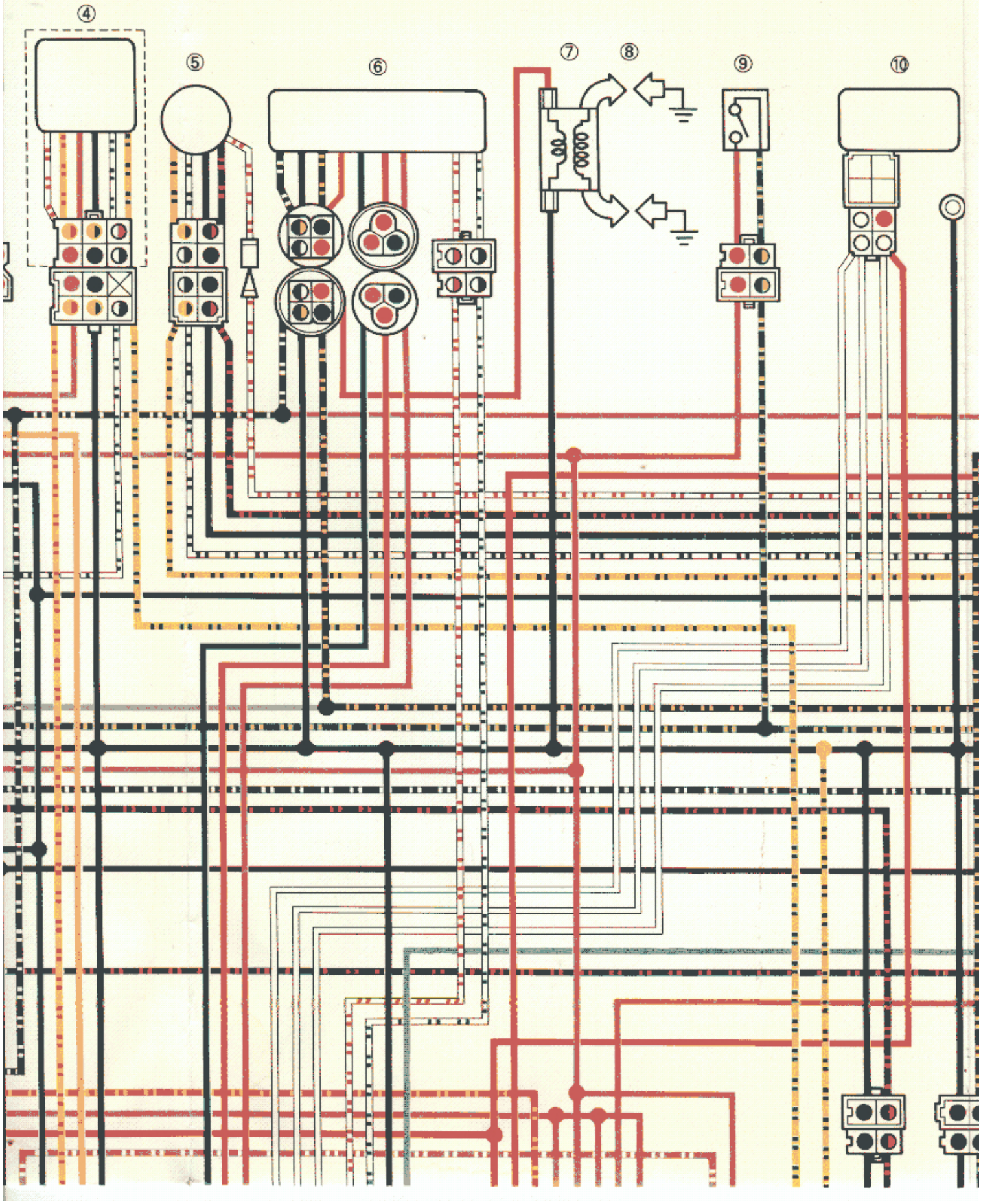
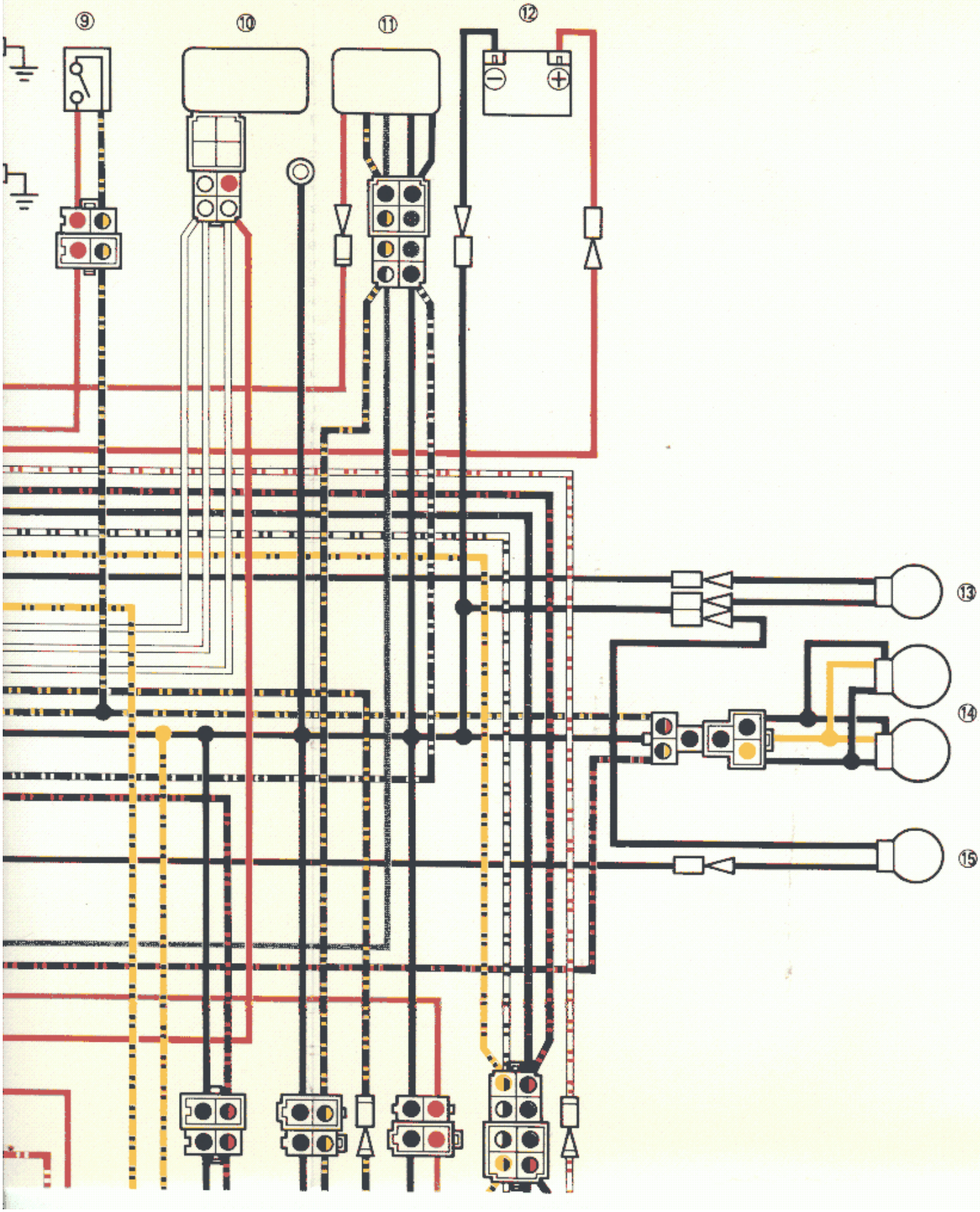
1. Lichtschalter ,,LIGHTS"
2. Motorstoppschalter ,,ENGINE STOP"
3. Vorderrad-Bremslichtschalter
4. Blinker-Abschaltautomatik (Ausgenommen für Deutschland)
5. Servomotor
6. C.D.I.-Zündeinheit
7. Zündspule
8. Zündkerze
9. Hinterrad-Bremslichtschalter
10. Gleichrichter/Spannungsregler
11. Zündsteuereinheit
12. Batterie
13. Hinteres Blinklicht (R)
14. Schluß/Bremsleuchte
15. Hinteres Blinklicht (L)
16. Y.P.V.S.-Steuerung
17. Seitenständerschalter
18. Ölstandschalter
19. Blinkerrelais
20. Sicherungskasten
21. Leerlaufschalter
22. C.D.I.-Magnetzünder
23. Signalhornknopf ,,HORN"
24. Blinklichtschalter
25. Lichthupenschalter ,,PASS"
26. Lichtschalter ,,LIGHTS" (Dimmer)
27. Vorderes Blinklicht (L)
28. Hauptschalter
29. Scheinwerfer
30. Nummernschildbeleuchtung
31. Blinkerkontrolleuchte ,,TURN"
32. Fernlicht-Kontrollampe ,,HIGH BEAM"
33. Öl-Kontrollampe ,,OIL"
34. Leerlauf-Kontrollampe ,,NEUTRAL"
35. Drehzahlmesser
36. Temperaturmesser
37. Herkonrelais
38. Instrumenten-Kontrollampe
39. Vorderes Blinklicht (R)
40. Hupe
41. Thermo-Einheit

*Für Deutschland

TZR250 WIRING DIAGRAM



RAM SCHEMA DE CABLAGE DE LA TZR250 T



ABLAGE TZR250 SCHALTPLAN